

TRIBUTE TO STRATEGISTS

Heroes of Might & Magic III strategy manual

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SPELL PROBABILITIES BY TOWN

All numbers are percentages and represent a probability that a given spell will appear in the Mage Guild of a specified town. They are valid only if all spells are enabled.

Level 1	Castle	Rampart	Tower		Inferno	Necropolis	Dungeon	Stronghold	Fortress	Conflux
			Library	Library without						
Bless	54	32	39	31	0	0	19	20	31	31
Bloodlust	0	0	0	0	53	32	30	53	31	31
Cure	54	54	39	31	31	0	30	31	53	31
Curse	0	0	25	20	31	54	30	0	0	0
Dispel	54	54	63	53	53	54	52	53	53	53
Haste	32	54	39	31	31	32	52	31	53	53
Magic Arrow	89	89	94	89	89	89	88	89	89	89
Protection from Fire	20	20	25	20	20	20	19	20	20	20
Protection from Water	20	20	25	20	20	20	19	20	20	20
Shield	54	20	39	31	20	54	30	31	31	31
Slow	32	54	63	53	53	32	30	31	31	53
Stone Skin	32	32	63	53	31	54	30	53	31	31
Summon Boat	20	32	39	31	31	20	30	31	20	20
View Air	20	20	25	20	20	20	19	20	20	20
View Earth	20	20	25	20	20	20	19	20	20	20
Level 2										
Blind	25	35	18	13	47	24	25	25	35	37
Death Ripple	0	0	0	0	0	95	0	0	0	0
Disguise	13	13	18	13	18	13	13	13	0	11
Disrupting Ray	35	25	46	35	47	24	35	35	35	37
Fire Wall	25	25	33	25	47	24	25	25	25	37
Fortune	25	35	33	25	18	13	13	25	25	11

Ice Bolt	95	95	46	35	0	35	35	25	96	77
Lightning Bolt	25	25	98	96	65	35	95	95	25	77
Precision	35	35	33	25	34	13	35	25	25	11
Protection from Air	13	13	18	13	18	13	13	13	13	11
Quicksand	25	25	46	35	18	24	25	35	35	20
Remove Obstacle	25	25	46	35	18	24	25	25	25	20
Scuttle Boat	35	25	33	25	18	24	25	25	25	20
Visions	13	13	18	13	18	13	13	13	13	11
Weakness	13	13	18	13	34	24	25	25	25	20

Level 3

Air Shield	13	24	32	24	9	13	13	24	17	13
Animate Dead	0	0	0	0	0	44	0	0	0	0
Anti-Magic	35	24	32	24	17	25	24	35	40	35
Destroy Undead	35	24	32	24	9	0	13	13	9	13
Earthquake	13	24	17	13	25	13	13	13	90	13
Fireball	24	24	32	24	90	35	44	35	9	35
Force Field	13	13	32	24	9	25	24	13	17	24
Forgetfulness	24	24	17	13	17	13	13	13	17	24
Frost Ring	44	43	55	43	0	35	35	35	17	35
Hypnotize	13	13	32	24	25	0	24	13	17	35
Land Mine	24	24	32	24	25	25	35	24	9	13
Mirth	13	13	17	13	9	13	13	35	9	13
Misfortune	13	13	17	13	25	25	13	13	9	13
Protection from Earth	13	13	17	13	9	13	13	13	0	13
Teleport	24	24	32	24	32	25	24	24	40	24

Level 4

Armageddon	0	0	0	0	10	10	20	0	0	0
Berserk	10	10	16	10	10	20	10	0	0	10

Chain Lightning	20	20	29	20	20	20	20	20	20	0	0	20
Clone	10	10	29	20	10	10	10	10	10	0	0	20
Counterstrike	10	20	16	10	10	10	10	10	10	0	0	10
Fire Shield	10	10	16	10	10	10	10	10	10	0	0	10
Frenzy	10	10	16	10	10	10	10	10	10	0	0	10
Inferno	10	10	16	10	20	10	10	10	10	0	0	20
Meteor Shower	20	20	29	20	20	20	20	20	20	0	0	20
Prayer	20	10	16	10	0	0	0	0	0	0	0	10
Resurrection	20	20	29	20	20	20	20	20	20	0	0	10
Slayer	10	10	16	10	10	10	10	10	10	0	0	10
Sorrow	10	10	16	10	10	10	10	10	10	0	0	10
Town Portal	20	20	29	20	20	20	20	20	20	0	0	20
Water Walk	20	20	29	20	20	20	20	20	20	0	0	20

Level 5

Air Elemental	0	0	28	14	0	16	16	0	0	0	0	12
Dimension Door	0	20	28	14	16	16	16	16	0	0	0	13
Earth Elemental	0	16	28	14	16	16	16	12	0	0	0	12
Fire Elemental	0	0	0	0	16	0	0	12	0	0	0	12
Fly	0	16	32	16	16	16	16	12	0	0	0	13
Implosion	0	16	28	14	16	20	20	12	0	0	0	13
Magic Mirror	0	16	28	14	0	0	0	12	0	0	0	13
Sacrifice	0	0	0	0	20	16	16	12	0	0	0	0
Water Elemental	0	16	28	14	0	0	0	12	0	0	0	12

HERO LEVELLING

Magic hero secondary skill advancement

SKILL NAME	CLERI	WARL	WITC	HERE	NECR	DRUI	BATT	WIZA	ELEM
Air Magic	4	2	3	3	3	2	3	6	6
Archery	3	2	3	4	2	5	4	2	2
Armorer	3	1	4	4	2	3	4	1	1
Artillery	2	1	1	4	3	1	4	1	1
Ballistics	4	6	8	6	5	4	6	4	4
Diplomacy	7	4	2	3	4	4	3	4	4
Eagle Eye	6	8	10	4	7	7	5	8	8
Earth Magic	3	5	3	4	8	4	3	3	6
Estates	3	5	1	2	3	3	1	5	3
Fire Magic	2	5	3	5	2	1	3	2	6
First Aid	10	6	8	5	0	7	4	7	4
Intelligence	6	8	7	6	6	7	5	10	8
Leadership	2	3	1	2	0	2	4	4	3
Learning	4	4	4	4	4	4	4	4	4
Logistics	4	2	3	3	4	5	9	2	2
Luck	5	2	4	2	1	9	2	4	2
Mysticism	4	8	8	10	6	6	4	8	8
Navigation	5	4	6	2	5	2	0	1	4
Necromancy	0	0	0	0	10	0	0	0	0
Offense	4	1	2	4	3	1	8	1	1
Pathfinding	2	2	2	4	6	5	4	2	2
Resistance	2	0	0	3	1	1	4	0	0
Scholar	6	8	7	5	6	8	4	9	8
Scouting	3	2	2	3	2	2	4	2	2
Sorcery	5	10	8	6	6	6	6	8	8
Tactics	2	1	1	4	2	1	5	1	1
Water Magic	4	2	3	2	3	4	3	3	6
Wisdom	7	10	8	8	8	8	6	10	8
Total	112	112	112	112	112	112	112	112	112

Magic hero level 18 primary stats (average)

Stat	CLERI	WARL	WITC	HERE	NECR	DRUI	BATT	WIZA	ELEM
Attack	4	2 (3)	2	5	5 (4)	3	7	3	4 (3)
Defense	3	3 (2)	4	4	3 (4)	5	5	4	3 (4)
Spell Power	7	10	8	7	7	6 (7)	5	7 (8)	8
Knowledge	8	7	8	6	7	8 (7)	5	8 (7)	8

Might hero secondary skill advancement

SKILL NAME	KNIG	OVER	BEAS	DEMO	DEAT	RANG	BARB	ALCH	PLAN
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Air Magic	3	1	1	2	2	1	3	4	2
Archery	5	6	7	6	5	8	7	5	8
Armorer	5	6	10	7	5	8	6	8	5
Artillery	5	8	8	5	5	6	8	4	8
Ballistics	8	7	7	7	7	4	8	6	8
Diplomacy	4	3	1	4	2	4	1	3	2
Eagle Eye	2	2	1	3	4	2	2	3	2
Earth Magic	2	3	3	3	4	3	3	3	3
Estates	6	4	1	3	0	2	2	4	3
Fire Magic	1	2	0	4	1	0	2	1	3
First Aid	2	1	6	2	0	3	1	2	1
Intelligence	1	1	1	2	5	2	1	4	1
Leadership	10	8	5	3	0	6	5	3	3
Learning	4	4	4	4	4	4	4	10	8
Logistics	5	8	8	10	5	5	7	6	8
Luck	3	1	2	2	1	6	3	2	2
Mysticism	2	3	2	2	4	3	3	4	3
Navigation	8	4	8	4	8	3	2	3	5
Necromancy	0	0	0	0	10	0	0	0	0
Offense	7	8	5	8	7	5	10	6	9
Pathfinding	4	5	8	4	4	7	8	4	6
Resistance	5	6	5	6	5	9	6	5	2
Scholar	1	1	1	2	2	1	1	3	1
Scouting	4	5	7	5	4	7	8	4	6
Sorcery	1	2	1	3	4	2	1	3	1
Tactics	7	10	6	6	5	5	8	4	8
Water Magic	4	0	2	1	3	3	0	2	2
Wisdom	3	3	2	4	6	3	2	6	2
Total	112	112	112	112	112	112	112	112	112

Might hero level 18 primary stats (average)

Stat	KNIG	OVER	BEAS	DEMO	DEAT	RANG	BARB	ALCH	PLAN
Attack	8	8	5	6	6	6	11	6	9
Defense	8	7	12	6	6	9	6	6	6
Spell Power	4 (3)	4	3	5	6	4	3	6 (5)	4
Knowledge	3 (4)	4	3	5	5	4	3	5 (6)	4

Demoniac gains 1 additional point with equal probability to any stat.

The numbers are relative, not absolute: if an Alchemist has 10 in Learning and 2 in Luck it means Learning is 5 times more likely to appear as a new skill in average. The same works when dealing with upgrades to the skill: if an Alchemist has only Luck and Learning on Basic or Advanced, he is 5 times more likely to level up Learning than Luck.

The game actually builds skill trees based on random seed that never changes during one game, so it is not actually possible to learn any skill on a level up - it is predetermined from the start of the game,

and can only be changed by learning a new skill from the Witch Hut, University, Scholar etc. However, a player cannot in any way know what will be offered (unless he is cheating), with a few exceptions (see below), so this is not a problem.

There are some coded level gains that work independently to the above probability tables:

- If a might hero OR AN ELEMENTALIST hasn't been offered a Magic school yet, he will be offered one on levels 4, 8, 12... (i.e. every four levels). If he gets offered a Magic school on one of other levels (according to the probability table above), the counter will be reset: e.g. if he is offered Magic school at level 3, it will be also offered on 7, 11, 15..., etc. unless the counter is reset.
- If a might hero OR AN ELEMENTALIST hasn't been offered Wisdom yet, it will be offered on levels 6, 12, 18... (i.e. every six levels). If the counter is reset it just restarts from the reset point.
- If a magic hero EXCEPT AN ELEMENTALIST hasn't been offered a Magic school yet, he will be offered one on levels 3, 6, 9... (i.e. every three levels). If he gets offered a Magic school on one of other levels (according to the probability table above), the counter will be reset: e.g. if he is offered Magic school at level 4, it will be also offered on 7, 10, 13..., etc. unless the counter is reset.
- If a magic hero EXCEPT AN ELEMENTALIST hasn't been offered Wisdom yet, it will be offered on levels 3, 6, 9... (i.e. every three levels). If the counter is reset it just restarts from the reset point.

The above is true when learning a Magic school/Wisdom, or improving the existing one.

If there is a conflict, and both Wisdom and Magic school are to appear according to the rule above, then Wisdom has the priority and will appear always.

You should always keep track which level up you are due to be offered a Magic school or Wisdom, in order to plan your hero development efficiently.

If a hero possesses a skill normally unattainable save if born with, or learned through Witch Hut and Scholar (e.g. Water Magic for Barbarians) then his chances of advancement in that skill will be the minimal possible (that is, they equal 1 according to the table above).

Hero level	Experience needed	Hero level	Experience needed
1	Heroes start with random 0-100	16	40567
2	1000	17	48279
3	2000	18	57533
4	3200	19	68637
5	4600	20	81961
6	6200	21	97949
7	8000	22	117134
8	10000	23	140156
9	12200	24	167782
10	14700	25	200933
11	17500	26	240714
12	20600	27	288451
13	24320	28	345735
14	28784	29	414475
15	34140	30	496963

HEROES: SPELLS, SKILLS AND STARTING TROOPS

If the hero does not start with a spell, he does not have a Spell Book either.

Heroes marked with an asterisk cannot be normally played with.

The probability of heroes starting (or appearing in Tavern) with only 1 stack is 9%, with 2 its 69%, with 3 its 22%.

Level 1 unit specialists will only start with level 1 units.

Level 2 unit specialists will only start with level 2 units.

Level 3 unit specialists may start with level 1 and level 3 units.

Heroes having the possibility to start with a War Machine will not start with level 2 units.

DEATH KNIGHTS	20-30 Skeletons 4-6 Zombies 4-6 Wights		
Charna	Necromancy, Tactics	Wights	Magic Arrow
Clavius	Necromancy, Offense	+350 Gold	Magic Arrow
Galthran	Necromancy, Armorer	Skeletons	Shield
Isra	Advanced Necromancy	Necromancy	Magic Arrow
Moander	Necromancy, Learning	Liches	Slow
Straker	Necromancy, Resistance	Black Knights	Haste
Tamika	Necromancy, Offense	Walking Dead	Magic Arrow
Vokial	Necromancy, Artillery	Vampires	Stone Skin
*Lord Haart	Advanced Necromancy	Black Knights	
NECROMANCERS	20-30 Skeletons 4-6 Zombies 4-6 Wights		
Aislinn	Necromancy, Wisdom	Meteor Shower	Meteor Shower
Nagash	Necromancy, Intelligence	+350 Gold	Prot. from air
Nimbus	Necromancy, Eagle Eye	Eagle Eye	Shield
Sandro	Necromancy, Sorcery	Sorcery	Slow
Septienna	Necromancy, Scholar	Death Ripple	Death Ripple
Thant	Necromancy, Mysticism	Animate Dead	Animate Dead
Vidomina	Advanced Necromancy	Necromancy	Curse
Xsi	Necromancy, Learning	Stone Skin	Stone Skin
BARBARIANS	15-25 Goblins 5-7 Wolf Riders 4-6 Orcs		
Crag Hack	Advanced Offense	Offense	
Gretchin	Offense, Pathfinding	Goblins	
Gurnisson	Offense, Artillery	Ballista	
Jabarkas	Offense, Archery	Orcs	
Krellion	Offense, Resistance	Ogres	
Shiva	Offense, Scouting	Rocs	
Tyraxor	Offense, Tactics	Wolf Riders	
Yog	Offense, Ballistics	Cyclopes	
*Duke Winston Boragus	Offense, Tactics	Ogres	
*Kilgor	Offense, Tactics	Behemoths	
BATTLE MAGES	15-25 Goblins 5-7 Wolf Riders 4-6 Orcs		
Dessa	Wisdom, Logistics	Logistics	Stone Skin
Gird	Wisdom, Sorcery	Sorcery	Bloodlust
Gundula	Wisdom, Offense	Offense	Slow
Oris	Wisdom, Eagle Eye	Eagle Eye	Prot. from Air
Saurug	Wisdom, Resistance	+1 Gem	Bloodlust
Terek	Wisdom, Tactics	Haste	Haste
Vey	Wisdom, Leadership	Ogres	Magic Arrow
Zubin	Wisdom, Artillery	Precision	Precision
RANGERS	12-24 Centaurs 3-5 Dwarfs 3-6 Elves		
Clancy	Resistance, Pathfinding	Unicorns	
Ivor	Archery, Offense	Elves	
Jenova	Advanced Archery	+350 Gold	
Kyrre	Archery, Logistics	Logistics	

Mephala	Leadership, Armorer	Armorer
Ryland	Leadership, Diplomacy	Dendroids
Thorgrim	Advanced Resistance	Resistance
Ufretin	Resistance, Luck	Dwarves
*Gelu	Leadership, Archery	Trains Sharpshooters

DRUIDS **12-24 Centaurs 3-5 Dwarfs 3-6 Elves**

Aeris	Wisdom, Scouting	Pegasi	Prot. from Air
Alagar	Wisdom, Sorcery	Ice Bolt	Ice Bolt
Uland	Adv. Wisdom, Ballistics	Cure	Cure
Coronius	Wisdom, Scholar	Slayer	Slayer
Elleshar	Wisdom, Intelligence	Intelligence	Curse
Gem	Wisdom, First Aid	First Aid	Summon Boat
Malcom	Wisdom, Eagle Eye	Eagle Eye	Magic Arrow
Melodia	Wisdom, Luck	Fortune	Fortune

ALCHEMISTS **30-40 Gremlins 3-5 Gargoyles 2-3 Golems**

Fafner	Scholar, Resistance	Nagas	Haste
Iona	Scholar, Intelligence	Genies	Magic Arrow
Neela	Scholar, Armorer	Armorer	Shield
Piquedram	Mysticism, Scouting	Gargoyles	Shield
Josephine	Mysticism, Sorcery	Golems	Haste
Rissa	Mysticism, Offense	+1 Mercury	Magic Arrow
Thane	Advanced Scholar	Genies	Magic Arrow
Torosar	Mysticism, Tactics	Ballista	Magic Arrow

WIZARDS **30-40 Gremlins 3-5 Gargoyles 2-3 Golems**

Aine	Wisdom, Scholar	+350 Gold	Curse
Astral	Advanced Wisdom	Hypnotize	Hypnotize
Cyra	Wisdom, Diplomacy	Haste	Haste
Daremyth	Wisdom, Intelligence	Fortune	Fortune
Halon	Wisdom, Mysticism	Mysticism	Stone Skin
Serena	Wisdom, Eagle Eye	Eagle Eye	Dispel
Solmyr	Wisdom, Sorcery	Chain Lightning	Chain Lightning
Theodorus	Wisdom, Ballistics	Magi	Shield
*Dracon	Advanced Wisdom	Trains Enchanters	

BEASTMASTERS **10-20 Gnolls 4-7 Lizardmen 2-4 Serpent Flies**

Alkin	Armorer, Offense	Gorgons
Broghild	Armorer, Scouting	Wyverns
Bron	Armorer, Resistance	Basilisks
Drakon	Armorer, Leadership	Gnolls
Gerwulf	Armorer, Artillery	Ballista
Korbac	Armorer, Pathfinding	Serpent Flies
Tazar	Advanced Armorer	Armorer
Wystan	Armorer, Archery	Lizardmen

Unlike all other Beastmasters, Bron receives 10-20 Gnolls 4-7 Basilisks 0-3 Serpent Flies at start.

WITCHES **10-20 Gnolls 4-7 Lizardmen 2-4 Serpent Flies**

Andra	Wisdom, Intelligence	Intelligence	Dispel
Merist	Wisdom, Learning	Stone Skin	Stone Skin
Mirlanda	Advanced Wisdom	Weakness	Weakness
Rosic	Wisdom, Mysticism	Mysticism	Magic Arrow
Styg	Wisdom, Sorcery	Sorcery	Shield
Tiva	Wisdom, Eagle Eye	Eagle Eye	Stone Skin

Verdish	Wisdom, First Aid	First Aid	Prot. from Fire
Voy	Wisdom, Navigation	Navigation	Slow
*Adrienne	Wisdom, Expert Fire magic		

KNIGHTS **10-20 Pikemen 4-7 Archers 2-3 Griffins**

Christian	Leadership, Tactics	Ballista	
Edric	Leadership, Armorer	Griffins	
Lord Haart	Leadership, Estates	Estates	
Orrin	Leadership, Archery	Archery	
Sir Mullich	Advanced Leadership	+2 speed	
Sorsha	Leadership, Offense	Swordsmen	
Sylvia	Leadership, Navigation	Navigation	
Tyris	Leadership, Tactics	Cavaliers	
Valeska	Leadership, Archery	Archers	
*Queen Catherine Ironfist	Leadership, Offense	Swordsmen	
*King Roland Ironfist	Leadership, Armorer	Swordsmen	

CLERICS **10-20 Pikemen 4-7 Archers 2-3 Griffins**

Adela	Wisdom, Diplomacy	Bless	Bless
Cuthbert	Wisdom, Estates	Weakness	Weakness
Caitlin	Wisdom, Intelligence	+350 Gold	Cure
Adelaide	Advanced Wisdom	Frost Ring	Frost Ring
Ingham	Wisdom, Mysticism	Monks	Curse
Loynis	Wisdom, Learning	Prayer	Prayer
Rion	Wisdom, First Aid	First Aid	Stone Skin
Sanya	Wisdom, Eagle Eye	Eagle Eye	Dispel

OVERLORDS **30-40 Troglod. 4-6 Harpies 3-4 Beholders**

Ajit	Leadership, Resistance	Beholders	
Arlach	Offense, Artillery	Ballista	
Dace	Tactics, Offense	Minotaurs	
Damacon	Advanced Offense	+350 Gold	
Gunnar	Tactics, Logistics	Logistics	
Lorelei	Leadership, Scouting	Harpies	
Shakti	Offense, Tactics	Troglodytes	
Synca	Leadership, Scholar	Manticores	
*Mutare	Tactics, Estates	Dragons	

WARLOCKS **30-40 Troglod. 4-6 Harpies 3-4 Beholders**

Alamar	Wisdom, Scholar	Resurrection	Resurrection
Darkstorn	Wisdom, Learning	Stone Skin	Stone Skin
Deemer	Wisdom, Adv. Scouting	Meteor Shower	Meteor Shower
Geon	Wisdom, Eagle Eye	Eagle Eye	Slow
Jaegar	Wisdom, Mysticism	Mysticism	Shield
Jeddite	Advanced Wisdom	Resurrection	Resurrection
Malekith	Wisdom, Sorcery	Sorcery	Bloodlust
Sephiroth	Wisdom, Intelligence	+1 Crystal	Prot. from Air

DEMONIACS **15-25 Imps 4-7 Gogs 3-4 Hell Hounds**

Rashka	Scholar, Wisdom	Efreet	
Calh	Archery, Scouting	Gogs	
Fiona	Advanced Scouting	Hell Hounds	
Ignatius	Tactics, Resistance	Imps	
Marius	Advanced Armorer	Demons	
Nymus	Advanced Offense	Pit Fiends	

Pyre	Logistics, Artillery	Ballista	
Octavia	Scholar, Offense	+350 Gold	
*Xeron	Leadership, Tactics	Devils	
HERETICS	15-25 Imps 4-7 Gogs 3-4 Hell Hounds		
Ash	Wisdom, Eagle Eye	Bloodlust	Bloodlust
Axis	Wisdom, Mysticism	Mysticism	Prot. from Air
Ayden	Wisdom, Intelligence	Intelligence	View Earth
Calid	Wisdom, Learning	+1 Sulfur	Haste
Olema	Wisdom, Ballistics	Weakness	Weakness
Xyron	Wisdom, Scholar	Inferno	Inferno
Xarfax	Wisdom, Leadership	Fireball	Fireball
Zydar	Wisdom, Sorcery	Sorcery	Stone Skin
PLANESWALKERS	15-25 Pixies 3-5 Air Elem. 2-3 Water Elem.		
Pasis	Offense, Artillery	Psychic Elementals	
Monere	Offense, Logistics	Psychic Elementals	
Thunar	Tactics, Estates	Earth Elementals	
Erdamon	Tactics, Estates	Earth Elementals	
Ignissa	Offense, Ballistics	Fire Elementals	
Fuir	Advanced Offense	Fire Elementals	
Lacus	Advanced Tactics	Water Elementals	
Kalt	Tactics, Learning	Water Elementals	
ELEMENTALISTS	15-25 Pixies 3-5 Air Elem. 2-3 Water Elem.		
Luna	Wisdom, Fire Magic	Fire Wall	Fire Wall
Brissa	Wisdom, Air Magic	Haste	Haste
Ciele	Wisdom, Water Magic	Magic Arrow	Magic Arrow
Labetha	Wisdom, Earth Magic	Stoneskin	Stoneskin
Inteus	Wisdom, Fire Magic	Bloodlust	Bloodlust
Aenain	Wisdom, Air Magic	Disrupting Ray	Disrupting Ray
Gelare	Wisdom, Water Magic	+350 Gold	Dispel
Grindan	Wisdom, Earth Magic	+350 Gold	Slow

ADVENTURE MAP MOVEMENT

Hero movement allowance

<u>Slowest creature speed Movement</u>		Town type	Native terrain
3 and less	1500	Castle	Grass
4	1560	Rampart	Grass
5	1630	Conflux	Grass
6	1700	Tower	Snow
7	1760	Inferno	Lava
8	1830	Necropolis	Dirt
9	1900	Dungeon	Subterranean
10	1960	Stronghold	Rough
11 and more	2000	Fortress	Swamp

Terrain movement costs

Terrain type	no Pathfinding	Basic Pathfinding	Advanced Pathfinding	Expert Pathfinding
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	Straight	Diagonal	Straight	Diagonal	Straight	Diagonal	Straight	Diagonal
Cobblestone road	50	71	50	71	50	71	50	71
Gravel road	65	92	65	92	65	92	65	92
Dirt road	75	106	75	106	75	106	75	106
Dirt, Grass, Lava, Subterranean	100	141	100	141	100	141	100	141
Rough	125	176	100	141	100	141	100	141
Sand, Snow	150	212	125	176	100	141	100	141
Swamp	175	247	150	212	125	176	100	141
Favorable Winds	66	93	66	93	66	93	66	93

There is one peculiarity: if the hero has at least 100 movement points left he will still be able to make a diagonal move on non penalty terrains.

This is not true for penalty terrains, even in case you have native creatures or (any level of) Pathfinding, you will not be able to move in any direction if you do not meet the movement requirement.

Artifacts that increase movement (Boots of Speed, Equestrian's Gloves, Necklace of Ocean Guidance, Sea Captain's Hat) need only be worn at the end of the turn to gain bonus.

Boots of Speed increase land movement by +600.

Equestrian Gloves increase land movement by +300. Two pairs of Gloves do not work cumulatively.

Speed artifacts (such as Cape of Velocity) do not increase adventure map movement, but hero's creature specialty does. Sir Mullich's specialty does not, however.

If the hero is moving from one terrain type to another (potential) penalty is calculated based on the terrain from which he is moving into another. So, if you move from grass to swamp there is no penalty, but there is one if moving back to grass.

If a hero attacks a tile beside a wandering stack his movement will deduce based on the terrain from which he is moving into the attacked tile after winning. The same works if a hero is moving onto a map object: he will lose movement based on the tile in which he was standing just prior.

If the hero attacks a wandering stack directly (therefore not moving into the spot the wandering stack occupies) his movement will deduce based on the terrain from which he is attacking. The same works when hero is picking up resources.

In short: only the tile the hero is moving from counts.

However, there is an exception: if the hero moves to or from a road he will not gain any movement bonus. More so, if he steps from a penalty terrain onto the road, or vice versa, penalty will apply.

A hero can visit any movement providing map object as many times as he wants, as long as he fights between revisits.

The distance a hero travels depends on the creature's speed and artifacts at the beginning of the day, not on changes after the day starts. Snow/swamp/sand/rough terrain penalty is calculated for every tile traveled.

Default distance traveled by boat is 15 tiles and is not affected by creature speed. Each Lighthouse adds +500 to boat travel, but doesn't work until the next day after being flagged. Necklace of Ocean Guidance provides +1000, Sea Captain's Hat +500 movement points. Navigation skill provides +750 per level of skill.

Land and sea enhancing movement artifacts are a separate source, and are added to the Logistics and Navigation bonus, not enlarged by it. Same goes for movement enhancing objects.

Only a single Nomad must be present in your army (mixed or alone) to prevent movement penalty on sand terrain.

If the army traverses a penalty associated terrain, and is composed of native and neutral units (Peasants, Mummies etc.), it can bypass the terrain penalty by placing all neutral units in left slots relative to the native units.

If the army avoids terrain penalty in any other way except through Pathfinding skill, it will never be able to avoid terrain penalty for the last movement tile.

When the hero is bought his movement for the day is calculated as if his slowest unit was the one he usually starts with when bought with full starting troops. For example, if you buy Mephala as a 3rd hero of the week, meaning she only has 1 Centaur to start with, you will be able to move as if your slowest unit was a dwarf. This remark does not apply to certain heroes: Ivor, Gem, Piquedram, Galthran, Lorelei, Tyraxor, Monere, Pasis and Valeska.

Special terrain types: Cursed Ground, Magic Plains, Fiery Fields, Lucid Pools, Magic Clouds, Rocklands, Clover Field, Evil Fog and Holy Ground do not in any way affect hero movement. They represent a layer on top of the existing terrain, which may not at all be visible, but affects movement penalty calculations.

Town Portal doesn't work while hero is in a boat, while Dimension Door does (you cannot teleport out of water of course).

Town Portal costs 200 movement points if on Expert level, 300 otherwise.

Dimension Door costs 100 movement points, regardless of Air magic skill.

Fly (spell and artifact) isn't affected by terrain penalties but is by terrain bonuses (roads only). No Air magic Fly movement penalty is the same as Basic Air (140%).

Interesting fact is that penalties apply only if hero traverses terrain that would bear penalty normally. If the hero has the necessary Pathfinding skill to nullify terrain penalty he doesn't even need to have Air magic, he will always fly full movement.

Angel Wings isn't affected by the above: it will always allow flying for full movement, other factors disregarded.

No Water magic Waterwalk penalty is the same as Basic Water (140%).

Boots of Levitation will always allow full levitating, no matter the school expertise.

Waterwalk (and Fly) is not affected by Favorable Winds.

APPEARANCE OF MAP OBJECTS

Some (important) objects may appear only on certain terrain types. Those are marked for each terrain in the table:

	Dirt	Grass	Lava	Rough	Sand	Snow	Subterranean	Swamp
Crypt	•	•			•	•		•
Trading Post	•	•		•		•		
Stables	•	•		•				
Water Wheel	•	•				•		•

Mystical Garden • • •
 Magic Spring •
 Tree of Knowledge • •
 Hillfort • •
 Pyramid •

Other objects may appear on any terrain type (exceptions: Lean to, Wagon, Campfire, Corpse etc).

NON-BATTLE TACTICS, INFO AND TIPS

Absolute probability of the specific hero type in each town's Tavern [%]

	Castle	Rampart	Tower	Inferno	Necropolis	Dungeon	Stronghold	Fortress	Conflux
Knight	6	6	6	5	5	5	6	6	6
Cleric	6	6	6	5	5	5	6	6	5
Ranger	6	6	6	5	5	5	6	5	5
Druid	6	6	6	5	5	5	5	6	6
Alchemist	6	6	6	5	5	5	6	5	5
Wizard	6	6	6	5	5	5	5	6	6
Demoniac	5	5	5	6	6	6	6	5	5
Heretic	5	5	5	6	6	6	5	6	5
Death Knight	5	5	5	6	6	6	6	5	5
Necromancer	5	5	5	6	6	6	5	6	6
Overlord	5	5	5	6	6	6	6	5	5
Warlock	5	5	5	6	6	6	5	6	6
Barbarian	6	6	6	6	6	6	6	5	6
Battle Mage	6	6	6	6	6	6	6	6	5
Beastmaster	6	6	6	6	6	6	6	6	6
Witch	6	6	6	6	6	6	5	6	6
Planeswalker	5	5	5	5	5	5	5	5	6
Elementalist	5	5	5	5	5	5	5	5	6

BATTLE PREFERENCES



Is it possible to know, looking at the 1st picture, which Pikemen stack will you engage? The rule is shown in the 2nd picture. The preference is always the creature to the left, and if they are aligned, the creature above. If you place the cursor directly over the creature then you will attack that creature: the mentioned is valid only if you place the cursor aside.

E.g. you need to fight Black Dragons or Giants to pass. Unfortunately, you can't attack the Giants directly, only Blacks, but you can attack the tile beside both of them. Using the rule above you may find a way to attack the Giants after all, in order to pass, or get the needed level up etc.

Map types by size (Small, Medium, Large, Extra Large) are 36², 72², 108² and 144² tiles large, or relatively, 6 : 25 : 56 : 100 (%).

If you retreat or surrender with the hero and rebuy him he will have the amount of movement points left when retreated/surrendered. Navigation (specialist) heroes can profit from this even more, for their naval movement points may be used for land movement when they retreat while in boat.

Sea Captain's Hat contains Summon Boat spell. With Advanced Water you can steal your opponent's boat.

Scholar preordained to give Basic skill will in fact give Advanced skill to a hero who already has Basic knowledge of the skill. Or Expert if he has Advanced, of course. And also, if a Scholar was preordained to give a secondary skill that the visiting hero doesn't have at all and that Hero has all 8 slots already full, then Scholar will give a +1 to a primary skill instead.

You can visit a Magic Spring twice in a row. The building is two tiles wide, just click on the other tile.

When visiting Sirens a hero will gain as much experience as HP sacrificed (30% of army). Although stated differently it is possible to visit the Sirens any number of times, provided a hero fought a battle, no matter the outcome, between visits.

Between turns you can check important wandering monsters on the map and remember their number (lots, horde etc.). If next week this changes you will know almost exactly how many monsters you will face.

When playing randoms, in general it is possible to guess the number of guards depending on what they are guarding. E.g. lots of Archers guarding an artifact and a Learning Stone are likely to be closer to 40 than 20 and so on.

You need to possess two Taverns to be able to see the size of stack guarding neutral towns (only descriptive). If you possess less you will only be able to see units' types.

If you are fighting any dwelling that provides artifacts, creatures, etc. and both yours and guardian creatures die you will need to revisit the dwelling, even start a combat against no one, to claim your award.

When invading a Pyramid a hero will learn the spell even if he doesn't possess Expert Wisdom, given that he acquires it post battle.

Rampart's Treasuries are cumulative.

If you possess at least one Crystal Dragon you receive 3 Crystal on Day 1.

Maximum possible level for any hero is 108.

You can check the number of guards in special buildings by right clicking them after you visited them (and refused to fight). You can never look at the number of guards in the Crypt, Derelict Ship and Shipwreck, all others are possible.

Abandoned mine can never be of Wood type. It is guarded by 100-249 Troglodytes.

Gold piles on the adventure map are always 500-1000, Wood/Ore 5-10, rest 3-6.

Windmill can never provide Wood.

Town and adventure map Taverns offer the same selection of heroes.

Two heroes of the same type can never appear at the same time in the Tavern. E.g. if you are looking for Tazar you must buy the Beastmaster offered, if any.

If you lose a hero it is always possible to rebuy him in the Tavern, but the chances to find him are slim. Your opponent may try this as well. In fact, the only heroes a player cannot buy on his turn are the ones offered in other players' Taverns at the same time and those in game (including Prison heroes).

If the hero has the necessary prerequisites (Wisdom), he'll learn the spells he doesn't know by entering the town. You don't have to spend a turn in it, nor do you have to click on the Mage Guild. However, if you town portal your hero, make sure you see the town screen in order to learn spells.

If you carry two identical Legion artifacts the second one does nothing. But if you give one to another hero in the Garrison, both will work.

Creatures in external dwellings and Portal of Summoning still grow regardless of plague.

Each level of Diplomacy lets your hero enter the Library of Enlightenment two levels earlier (normally level 10).

Every neutral town starts with level 1 and 2 buildings prebuilt.

It is possible to dismiss the hero in the Garrison by selecting it in Kingdom Review (e.g. you already have 8 heroes on the adventure map and so are not allowed to move him out of the Garrison).

PORTAL OF SUMMONING

If you have only one external dwelling flagged you will always get creatures from that dwelling. If you have more than 1 external dwelling flagged and then you build Portal of Summoning you will get a random creature on the day, and in next weeks.

The cost of upgrading troops at a Hill Fort:

Level 1: Free

Level 2: 25% of normal cost

Level 3: 50% of normal cost

Level 4: 75% of normal cost

Level 5: normal cost

Level 6: normal cost

Level 7: normal cost

Resources required for upgrading level 7 units are not affected, only Gold.

Any external dwelling flagged, regardless of level, increases town production of the unit by 1. It is not affected by Citadel/Castle, Legion artifacts, but is by Grail structure (rounded down).

Creature growth works as such:

- Citadel and Castle affect base unit growth (without the Horde building)

- Horde building adds its own bonus

- any external dwellings provide additional +1 per dwelling

- Statue of Legion increases (Base unit growth + Citadel + Castle) by 50% in all towns

- Grail increases the sum of all above mentioned bonuses by 50% in the town installed

Calculations are rounded down.

If a hero retreats or is defeated only the surviving guards will be guarding the dwelling if another hero attacks in the same week. The guards will return to full force at the start of the week.

After a hero defeats dwelling guards the dwelling may be reflagged any number of times in that week by any other player without a fight. The guards will return at the start of the next week.

Any dwelling of level 1-4 may be flagged without fight. Level 5 are guarded by 9 (see exception in the paragraph below), level 6 by 6, and level 7-10 dwellings by 3 appropriate creatures (6 Firebirds are the exception). The creatures are always found in 1 stack.

Elemental Conflux is always guarded by 12 Earth Elementals. Flagging it will increase the growth of Air/Storm Elementals only.

Earth Elemental Conflux is also guarded by 12 creatures, the only violation of the rule in the paragraph above. Also, Earth Elemental Conflux provides 4 Elementals weekly, unlike all other level 5 dwellings (that provide 3).

Pyre dwelling provides 2 Firebirds weekly, unlike all other level 7 dwellings (that provide 1).

A hero will be able to cast a spell contained in an equipped Scroll regardless of whether or not he has the level of Wisdom skill normally needed to cast the spell in question. However, he must possess a Spell Book to be able to cast it.

Hero does not need to possess a Spell Book or Wisdom if he learns a spell from an artifact or by birth.

Dig holes along the coast to prevent that a boat can land there. If it's diagonal, you have to dig three holes.

Disguise does not work against AI.

Only these artifacts work cumulatively on the same hero, all others do not:

- All income artifacts (where it is possible to equip more than one of the same type)
- Quiet Eye of the Dragon

You can build a town structure and then the Grail structure on the same day but not vice-versa.

If a hero with Grail in his backpack retreats, surrenders or loses a fight, the Grail will be lost.

Aurora Borealis will not teach visiting heroes spells of level 3-5 if they do not possess Wisdom.

Heroes without the Scouting skill and artifacts have a scouting range of 5.

External Stables automatically upgrades Cavaliers to Champions.

AI can still cast all spells (except those it never casts like Berserk) while standing on Cursed Ground.

Necropolis' Skeleton Transformer transforms Hydras and living Dragons to Bone Dragons. All other units are transformed to Skeletons.

Eagle Eye will allow you to learn spells from heroes only; you cannot learn spells from creatures.

If the Pandora's Box is guarded by level 6/7 creatures, try not to take it until you have Advanced/Expert Wisdom. Otherwise, if it's a spell inside, you gain nothing.

WEEK/MONTH EVENTS

Week events:

1. No growth weeks happen with 75% probability, while +5 growth weeks happen with 25% probability. As a consequence, there is a 0,2% probability for a specific creature +5 growth week (there are 126 possible creatures in total).
2. There can never be a double growth week.
3. There can never be a week of neutral creatures.

Month events:

1. No growth months happen with 50% probability, double growth months happen with 40% probability, and plague months happen with 10% probability.
2. Only the following creatures may experience double growth:

Fortress: Serpent Fly

Tower: Gremlin

Dungeon: Troglodyte

Fortress: Lizardman

Stronghold: Hobgoblin

Dungeon: Harpy

Castle: Griffin

Stronghold: Wolf Rider

Necropolis: Wight

Rampart: Centaur

Inferno: Gog

Rampart: Pegasus

Inferno: Imp

As a consequence, there is a 3,3% probability for a specific creature double growth month. The only exception to the rule is when Grail is built in an Inferno town: all the following months will be Imp double growth months.

3. There can never be a +5 growth month.

If you happen to get a Week/Month of unupgraded creatures whose dwelling you already upgraded in your town you will not receive a bonus.

Plague months have the following characteristics:

- All unpurchased creatures are cut in half, rounded down.
- All dwellings produce 0 creatures (exception below).
- Any dwelling which has horde building built is immune to the effects of plague. Thus a Castle with a Griffin Bastion produces Griffins normally. Similarly with Dwarves, Dendroids, Imps, Cerberi, Skeletons, Gnolls, etc.

PHYSICAL DAMAGE CALCULATION

Total damage = Base damage * (1 + a + b + c + ...) * (1 - q) * (1 - r) * (1 - s) * ...

Base damage is damage displayed for every unit in its stats (e.g. 40-50 for a Black Dragon). For a stack of creatures it is calculated as such:

- If there are less than 10 creatures in a stack then a random integer is chosen in a damage range for each creature, and they are added up.
- If there are more than 10 creatures in a stack, 10 random integers are chosen in a damage range of the creature and added up. The result is multiplied by n/10, where n is the number of creatures in the stack, and rounded down.

The probability that the resulting base damage will be in the lowest/highest 25% is (approximately):

5.5% when the damage range contains 2 values

4.0% when the damage range contains 3 values

1.6% when the damage range contains 4 values

1.6% when the damage range contains 5 values

0.9% when the damage range contains 6 values

The decrease slows down quickly from now on. The probabilities only hold true if the attacking stack contains at least 10 creatures, otherwise they increase (to 25% in case there is only one creature in the stack).

a, b, c,... are damage bonuses, q, r, s,... are damage reductions (both as decimal numbers).

Damage cannot be reduced to less than 1 and is rounded down.

Damage Bonuses

Attacker's Attack > Defender's Defense	0,05 * (A - D), up to a maximum of 3
Attacker is a shooter	Archery skill bonus, additive with artifact bonuses if Archery skill present
Attacker is a Ballista, does double damage	1
Attacking hero has specialty Archery	0,05 * Hero level * Archery bonus
Attacking hero has Offense	Offense skill bonus
Attacking hero has specialty Offense	0,05 * Hero level * Offense bonus
Attacker gets Luck	1
Attacker is a Cavalier / Champion	0,05 * hexes traveled
Attacker is an opposite Elemental type	1
Attacker 'hates' the Defender	0,5
Dread Knight's double damage	1
Bless specialty Hero, Bless is cast	0,03 * Hero level / Unit level

Damage Reductions

Defender's Defense > Attacker's Attack	0,025 * (D - A), up to a maximum of 0,7
Defending hero has Armorer	Armorer skill bonus
Defending hero has specialty Armorer	0,05 * Hero level * Armorer bonus, additive with base Armorer bonus
Defender has Shield spell applied	Shield spell bonus
Attacker is a shooter, Basic Air Shield is cast	0,25
Attacker is a shooter with range, wall or melee penalty, or Advanced Air Shield is cast	0,5
Attacking a petrified unit	0,5
Attacker is Psychic Elemental, defender is immune to Mind spells	0,5
Attacker is Magic Elemental, defender is Magic Elemental or the Black Dragon	0,5
Unit retaliates from Basic Blind state	0,5
Unit retaliates from Advanced Blind state	0,25

Maximum Attack - Defense difference relevant for calculations is 60 (3 times the base damage).

Maximum Defense - Attack difference relevant for calculations is 28 (70% damage reduction).

Specialty in Armorer is additive with the base Armorer damage reduction (therefore has greater effect). However, Shield bonus isn't additive but is multiplied normally with Armorer bonus.

Example: Level 18 Tazar with Expert Armorer and 12 Defense (normal distribution with no artifacts) has a Chaos Hydra. Level 18 Gunnar with Expert Offense and 8 Attack (normal distribution with no artifacts) has a Black Dragon. How much damage will a Black Dragon do?

Black Dragon's base damage = 40-50

Damage bonuses: 0,3 (Expert Offense), 0,05 (Attack - Defense difference)

Damage reductions: 0,285 (Expert Armorer and specialty)

Total damage = (40-50) * (1 + 0,3 + 0,05) * (1 - 0,285) = (40-50) * 1,35 * 0,715 = 38-48

If the Hydras had Expert Shield damage would have been 27-33.

BALLISTA DAMAGE CALCULATION

Ballista damage = Base damage * (1 + a + b + c + ...) * (1 - q) * (1 - r) * (1 - s) * ...

Base damage is damage displayed in Ballista's stats. It is calculated as $(2-3) * (\text{Hero Attack} + 1)$.

If Bless is applied it applies to base damage in total: it is wrong to change the base damage formula to $4 * (\text{Hero Attack} + 1)$ for Advanced Bless. Base damage when blessed is simply calculated as: $3 * (\text{Hero Attack} + 1)$, + 1 if Advanced or Expert Bless is applied.

a, b, c,... are damage bonuses, q, r, s,... are damage reductions (both as decimal numbers). See chapter above for clarification.

Damage cannot be reduced to less than 1 and is rounded down.

If a hero has Ballista specialty he adds +1 to its Attack and Defense every 10 levels starting from level 5.

Theoretically, the most powerful Ballista hero is Orrin, but he overtakes Gurnisson too late for it to be noticeable. Ballista's usefulness rapidly drops as the game evolves and armies grow in numbers, which makes Gurnisson by far the most useful Ballista hero for he gets most from it from the start.

Example: A level 20 Gurnisson with 12 Attack (normal distribution with no artifacts), Expert Artillery and Expert Archery (but no artifacts) attacks a hero with Defense 12. No spells are cast, no range penalty, no Armorer. Ballista will deal (per shot):

Against Archangels (42 Defense): 41-61

Against Crusaders (24 Defense): 75-112

Against Marksmen (15 Defense): 88-132

If Ballista was blessed it would have dealt 63, 115, 135 damage.

SPELL DAMAGE CALCULATION

Damage = (Base damage) * (1 + Sorcery + Sorcery special) * (1 + Orb) * (1 + Vulnerabilities)

All numbers are decimal.

Damage is rounded down.

Base damage is based on spell selected and hero's SP and Magic school expertise.

Sorcery is bonus based on expertise in the skill.

Sorcery specialty is bonus based on hero and unit level for heroes with Sorcery specialty.

Orb is bonus provided by the proper Orb.

Vulnerabilities are creature vulnerabilities to certain spells.

HERO'S UNIT SPECIALTY

Unit specialties work for both unupgraded and upgraded units and for Ballista (which is treated as a level 5 unit):

Unit receives +1 speed immediately.

Unit's base Attack and Defense increase based on the following (independent of the above):

$A/D_{\text{new}} = \text{RoundUp} \{A/D_{\text{base}} * [1 + 0,05 * \text{RoundDown} (\text{Hero level} / \text{Unit level})]\}$

The higher the level of the unit, lesser the bonus: level 1 unit specialist will approximately double his unit's stats at level 20, level 2 unit specialist at level 40, level 3 unit specialist at 60, etc. For example, the comparison between Stronghold unit specialty heroes at level 20:

Hero	Unit	Base A/D of upgraded unit	Specialty bonus in A/D	Specialty bonus [%]
-------------	-------------	----------------------------------	-------------------------------	----------------------------

Gretchin	Goblins	5	3	5	3	100
Tyraxor	Wolf Riders	8	5	4	3	54
Jabarkas	Orcs	8	4	3	2	42
Krellion	Ogres	13	7	4	2	30
Shiva	Rocs	13	11	3	3	25
Yog	Cyclops	17	13	3	2	17

This is true for all standardly playable heroes but Planeswalkers. For them it works differently:

Pasis and Monere: Magic/Psychic Elementals receive a permanent +3A, +3D

Thunar and Erdamon: Earth/Magma Elementals receive a permanent +2A, +1D, +5dmg

Ignissa and Fiur: Fire/Energy Elementals receive a permanent +1A, +1D, +2dmg

Lacus and Kalt: Water/Ice Elementals receive a permanent +2A

HERO'S SECONDARY SKILL SPECIALTY

If the hero possesses a secondary skill specialty its bonus is calculated:

Hero level * 0,05 * Secondary skill bonus

The only exception is the Navigation skill bonus which is calculated with a 0,02 factor (multiplied with entire naval movement points).

The bonus is additive with base skill bonus.

HERO'S SPELL SPECIALTY

This is true for all spell specialty heroes save Ciele and Luna, including Astral and Uland.

Hero's spell specialty bonus is calculated as:

(1 + Hero level * 0,03 / Unit level)

The bonus is additive with base spell damage.

The bonus is negligible against higher level units.

PECULIAR HERO SPECIALTIES

Loynis' Prayer specialty gives an additional +3 speed, attack and defense to levels 1-2, +2 levels 3-4, +1 levels 5-6 and no bonuses to level 7.

Terek/Cyra/Brissa's Haste specialty gives an additional +3 speed to level 1-2, +2 levels 3-4, +1 levels 5-6 and no speed to level 7.

Coronius' Slayer specialty gives an additional +4 attack to level 1, +3 level 2, +2 level 3, +1 level 4, no attack to levels 5-6-7.

Zubin's Precision specialty gives an additional +3 attack to ranged levels 1-2, +2 levels 3-4, +1 levels 5-6, no attack to level 7.

Daremyth and Melodia's Fortune specialty enables them to cast a +3 Luck Fortune spell regardless of Air magic expertise.

Xsi, Darkstorn, Merist and Labetha's Stoneskin specialty gives an additional +3 defense to levels 1-2, +2 levels 3-4, +1 levels 5-6 and no defense to level 7.

Ash and Inteus' Bloodlust specialty gives an additional +3 attack to levels 1-2, +2 levels 3-4, +1 levels 5-6 and no attack to level 7.

Adela's Bless specialty adds $BD * 0,03 * Hero\ level / Unit\ level$ damage to all units on top of the Bless spell. E.g., at level 18, Adela will provide (in average) 54% bonus damage to Halberdiers, 27% to Marksmen, 18% to Royal Griffins, 13,5% to Crusaders, 10,8% to Zealots, 9% to Champions, and 7,1% to Archangels.

Cuthbert, Mirlanda and Olema's Weakness specialty reduces attack by additional -3 vs. levels 1-2, -2 levels 3-4, -1 levels 5-6 and 0 vs. level 7.

Ciele Magic Arrow specialty increases Magic Arrow damage by 50%.

Luna's Firewall specialty doubles Firewall's damage.

MORALE AND LUCK

+1 morale / luck \Rightarrow 1/24 probability for double turn / damage.

+2 morale / luck \Rightarrow 1/12 probability for double turn / damage.

+3 morale / luck \Rightarrow 1/8 probability for double turn / damage.

-1 morale \Rightarrow 1/12 probability to lose a turn.

-2 morale \Rightarrow 1/6 probability to lose a turn.

-3 morale \Rightarrow 1/4 probability to lose a turn.

0 (neutral) morale / luck \Rightarrow no probability of positive or negative morale, or luck.

Negative luck cannot appear.

All units of the same town: +1 morale

(Arch)angel in army: +1 morale

Opponent has a Bone/Ghost Dragon: -1 morale

Necro unit in army: -1 morale

Two town's units in army: 0 morale

Three town's units in army: -1 morale

Four town's units in army: -2 morale

Five or more town's units in army: -3 morale

Sorrow modifies morale by -1/-2, based on Earth magic expertise.

Mirth modifies morale by +1/+2, based on Water magic expertise.

NECROMANCY

Calculations are made using Necromancy skill before battle.

All Necromancy bonuses are cumulative.

The number of Skeletons raised from one killed stack is calculated as:

$Necromancy * Stack's\ total\ HP / Skeleton's\ HP$, up to maximum of creatures killed.

For Skeleton Warriors multiply with 2/3.

+Life artifacts do not affect Necromancy.

Necromancy skill is capped at 100%.

JOINING

Hero strength = $\sqrt{[(1 + 0,05 * Attack) * (1 + 0,05 * Defense)]}$

Army strength = sum of all creatures' AI values in hero's army

Total army strength = round down (Hero power * Army power)

Neutral's strength = sum of all neutral creatures' AI values

$k = \text{Total army strength} / \text{Neutrals' strength}$

Strength factor (depends on k):

$k \geq 7$	Strength factor = 11
$1 \leq k < 7$	Strength factor = round down $[2 * (k - 1)]$
$0,5 \leq k < 1$	Strength factor = -1
$0,333 \leq k < 0,5$	Strength factor = -2
$k < 0,333$	Strength factor = -3

Sympathy Condition

0	There are no creatures of the same kind as neutrals in hero's army. This includes upgraded creatures as well, and works in both ways for all, except for Magma/Earth, Ice/Water and Energy/Fire Elementals.
1	There is at least one creature of the same kind as neutrals (including upgrades as in paragraph above) in hero's army.
2	Total number of creatures of the same kind as neutrals in hero's army (including upgrades as in paragraphs above) compromises more then 50% of the army.

Mood = level of aggression of neutral armies:

Compliant	Friendly	Aggressive	Hostile	Savage
-4	Random 1 to 7 In average 4	Random 1 to 10 In average 5,5	Random 4 to 10 In average 7	10

Charisma = Strength factor + Diplomacy level + Sympathy

1. If Mood > Charisma neutrals will fight.
2. If Charisma \geq Mood:
 - a) Neutrals will join for free if Sympathy + Diplomacy level + 1 \geq Mood.
 - b) If the above is not met, neutrals will join for money (resources are not required) if Sympathy + 2 * Diplomacy level + 1 \geq Mood.
 - c) If neither of the above is met neutrals will fight.

If you reject the join offer from cases a) or b) neutrals will fight if Charisma = Mood or if they are preset to fight (possible on fixed maps only), otherwise they will flee.

E.g. probabilities for free and money join vs. hostile creatures (all creatures on random maps) are (in case Charisma \geq Mood condition is met of course, otherwise they are 0%):

Free join probabilities [%]					Money join probabilities [%]				
Sympathy	Diplomacy				Sympathy	Diplomacy			
	None	Basic	Advanced	Expert		None	Basic	Advanced	Expert
0	0	0	0	14	0	0	29	57	
1	0	0	14	29	1	14	43	71	
2	0	14	29	43	2	29	57	86	

If the units are not willing to join, or you refuse (don't have enough) the join for money, you can still always fight them for experience.

Units will join for their purchase price, it cannot be modified.

Map tile is irrelevant when checking join probability.

If playing on Easy difficulty, hero's Diplomacy level is increased by 1 even if the hero does not possess the Diplomacy skill. Diplomacy level still cannot exceed 3 in total.

AI Values

Azure Dragon	78845	Gorgon	890	Water Elemental	315
Crystal Dragon	39338	Genie	884	Dragon Fly	312
Rust Dragon	26433	Lich	848	First Aid Tent	300
Faerie Dragon	19580	Minotaur	835	Mummy	270
Archangel	8776	Dendroid Soldier	803	Serpent Fly	268
Black Dragon	8721	Vampire Lord	783	Wight	252
Gold Dragon	8613	Diamond Golem	775	Stone Golem	250
Titan	7500	Pit Fiend	765	Magog	240
Arch Devil	7115	Zealot	750	Orc Chieftain	240
Phoenix	6721	Greater Basilisk	714	Harpy Hag	238
Ancient Behemoth	6168	Arch Mage	680	Wood Elf	234
Chaos Hydra	5931	Ogre Mage	672	Battle Dwarf	209
Devil	5101	Gold Golem	600	Wolf Raider	203
Angel	5019	Ballista	600	Obsidian Gargoyle	201
Green Dragon	4872	Crusader	588	Orc	192
Red Dragon	4702	Sharpshooter	585	Marksman	184
Ghost Dragon	4696	Medusa Queen	577	Stone Gargoyle	165
Firebird	4547	Mage	570	Gog	159
Hydra	4120	Vampire	555	Lizard Warrior	156
Giant	3718	Basilisk	552	Harpy	154
Bone Dragon	3388	Silver Pegasus	532	Boar	145
Behemoth	3162	Pegasus	518	Dwarf	138
Naga Queen	2840	Dendroid Guard	517	Centaur Captain	138
Dread Knight	2382	Medusa	517	Rogue	135
Champion	2100	Catapult	500	Wolf Rider	130
Black Knight	2087	Magma Elemental	490	Zombie	128
War Unicorn	2030	Storm Elemental	486	Archer	126
Naga	2016	Monk	485	Lizardman	126
Magic Elemental	2012	Horned Demon	480	Halberdier	115
Cavalier	1946	Energy Elemental	470	Centaur	100
Efreet Sultan	1848	Royal Griffin	448	Walking Dead	98
Unicorn	1806	Swordsman	445	Sprite	95
Efreeti	1670	Demon	445	Gnoll Marauder	90
Psychic Elemental	1669	Ogre	416	Skeleton Warrior	85

Scorpicore	1589	Iron Golem	412	Infernal Troglodyte	84
Manticore	1547	Ammo Cart	400	Pikeman	80
Wyvern Monarch	1518	Arrow Turret	400	Hobgoblin	78
Cyclops King	1443	Cerberus	392	Halfling	75
Wyvern	1350	Ice Elemental	380	Master Gremlin	66
Cyclops	1266	Evil Eye	367	Familiar	60
Pit Lord	1224	Hell Hound	357	Goblin	60
Enchanter	1210	Air Elemental	356	Skeleton	60
Thunderbird	1106	Griffin	351	Troglodyte	59
Power Lich	1079	Fire Elemental	345	Gnoll	56
Minotaur King	1068	Nomad	345	Pixie	55
Mighty Gorgon	1028	Beholder	336	Imp	50
Roc	1027	Grand Elf	331	Gremlin	44
Troll	1024	Earth Elemental	330	Peasant	15
Master Genie	942	Wraith	315		

MARKETPLACE, ARTIFACT MERCHANT, FREELANCER'S GUILD AND ALTAR OF SACRIFICE

Marketpl.	Gold	Gold	Wood, Ore	Wood, Ore	Wood, Ore	Other	Other	Other
	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒
	Wood, Ore	Other	Gold	Wood, Ore	Other	Gold	Wood, Ore	Other
1	2500⇒1	5000⇒1	1⇒25	1⇒10	1⇒20	1⇒50	1⇒5	1⇒10
2	1667⇒1	3333⇒1	1⇒37	1⇒7	1⇒13	1⇒75	1⇒3	1⇒7
3	1250⇒1	2500⇒1	1⇒50	1⇒5	1⇒10	1⇒100	1⇒3	1⇒5
4	1000⇒1	2000⇒1	1⇒62	1⇒4	1⇒8	1⇒150	1⇒2	1⇒4
5	833⇒1	1667⇒1	1⇒75	1⇒3	1⇒7	1⇒150	1⇒2	1⇒3
6	714⇒1	1429⇒1	1⇒88	1⇒3	1⇒6	1⇒175	1⇒1	1⇒3
7	625⇒1	1250⇒1	1⇒100	1⇒3	1⇒5	1⇒200	1⇒1	1⇒3
8	556⇒1	1111⇒1	1⇒112	1⇒2	1⇒4	1⇒225	1⇒1	1⇒2
9+	500⇒1	1000⇒1	1⇒125	1⇒2	1⇒4	1⇒250	1⇒1	1⇒2

Trading Post offers the same exchange rate as 5 Marketplaces.

Marketplace		Artifact Merchant		
Marketpl.	Discount [%]	Marketpl.	Discount when buying [%]	Surplus when selling [%]
1	0	1	0	0
2	33	2	20	25
3	50	3	33	50
4	60	4	43	75
5	66	5	50	100
6	71	6	56	125
7	75	7	60	150
8	77	8	63	175
9+	80	9+	66	200

The price at a Black Market is the same as in an Artifact Merchant with 5 Marketplaces (50% of the price).

Selling scrolls can be extremely profitable: e.g. with 3 Marketplaces they go for 750 gold regardless of level. On randoms, where it is often easy to accumulate plenty of them, they alone can easily pay off Artifact Merchant investment.

Artifacts' prices in the Artifact Merchant with one Marketplace in possession

TREASURE	Buy	Sell	MAJOR	Buy	Sell
Collar of Conjuring	2500	100	Arms of Legion	2500	100
Charm of Mana	2500	100	Garniture of Interference	10000	400
Pendant of Dispassion	5000	200	Surcoat of Counterpoise	20000	800
Pendant of Holiness	5000	200	Pendant of Second Sight	25000	1000
Pendant of Free Will	5000	200	Pendant of Negativity	25000	1000
Ring of Conjuring	5000	200	Stateman's Medal	25000	1000
Bird of Perception	5000	200	Diplomat's Ring	25000	1000
Talisman of Mana	5000	200	Ambassador's Sash	25000	1000
Speculum	5000	200	Ring of Wayfarer	25000	1000
Spyglass	5000	200	Shackles of War	25000	1000
Breastplate of Petrified Wood	5000	200	Endless Purse of Gold	25000	1000
Helm of the Alabaster Unicorn	5000	200	Head of Legion	25000	1000
Badge of Courage	5000	200	Everpouring Vidal of Mercury	25000	1000
Crest of Valor	5000	200	Everflowing Crystal Cloak	25000	1000
Glyph of Gallantry	5000	200	Eversmoking Ring of Sulfur	25000	1000
Clover of Fortune	5000	200	Ring of Infinite Gems	25000	1000
Cards of Prophecy	5000	200	Ogre's Club of Havoc	25000	1000
Ladybird of Luck	5000	200	Targ of the Rampaging Ogre	25000	1000
Cape of Conjuring	7500	300	Tunic of the Cyclops King	25000	1000
Mystic Orb of Mana	7500	300	Orb of Firmament	30000	1200
Amulet of the Undertaker	10000	400	Orb of Silt	30000	1200
Bow of Elven Cherrywood	10000	400	Orb of Tempestous Fire	30000	1200
Stoic Watchman	10000	400	Orb of Driving Rain	30000	1200
Centaur's Axe	10000	400	Dead Man's Boots	30000	1200
Shield of the Dwarven Lords	10000	400	Angel Feather Arrows	30000	1200
Quiet Eye of the Dragon	10000	400	Sword of Hellfire	30000	1200
Dragonbone Greaves	10000	400	Shield of the Damned	30000	1200
Still Eye of the Dragon	10000	400	Breastplate of Brimstone	30000	1200
Spirit of Oppression	10000	400	Hellstorm Helmet	30000	1200
Hourglass of the Evil Hour	10000	400	Dragon Scale Shield	30000	1200
Pendant of Life	12500	500	Necklace of Dragonteeth	30000	1200
Pendant of Death	12500	500	Pendant of Courage	35000	1400
Pendant of Total Recall	15000	600	Sphere of Permanence	37500	1500
Skull Helmet	15000	600	Endless Bag of Gold	37500	1500
Ring of Vitality	25000	1000	Recanter's Cloak	40000	1600
Necklace of Swiftnes	25000	1000	Golden Bow	40000	1600
Legs of Legion	25000	1000	Vial of Lifeblood	50000	2000
			Cape of Velocity	50000	2000
			Necklace of Ocean Guidance	50000	2000
MINOR					
Emblem of Cognizance	15000	600			
Equestrian gloves	15000	600	RELIC		
Blackshard of the Dead Knight	15000	600	Boots of Polarity	-	1200
Rib Cage	15000	600	Dragon Scale Armor	-	1600
Shield of the Yawning Dead	15000	600	Crown of the Dragontooth	-	1600
Vampire's Cowl	20000	800	Sandals of the Saint	-	1600
Bowstring of the Unicorn's Mane	20000	800	Boots of Levitation	-	2000

Greater Gnoll's Flail	20000	800	Endless Sack of Gold	-	2000
Scales of Greater Basilisk	20000	800	Titan's Gladius.	-	2000
Buckler of the Gnoll King	20000	800	Sentinel's Shield	-	2000
Helm of Chaos	20000	800	Titan's Curias	-	2000
Red Dragon Flame Tongue	20000	800	Thunder Helmet	-	2000
Dragon Wing Tabard	20000	800	Celestial Necklace of Bliss	-	2400
Armor of Wonder	20000	800	Sea Captain's Hat	-	3000
Ring of Life	25000	1000	Lion's Shield of Courage	-	3200
Inexhaustable Cart of Wood	25000	1000	Tome of Air Magic	-	4000
Inexhaustable Cart of Ore	25000	1000	Tome of Earth Magic	-	4000
Loins of Legion	25000	1000	Tome of Fire Magic	-	4000
Torso of Legion	25000	1000	Tome of Water Magic	-	4000
Crown of the Supreme Magi	25000	1000	Orb of Inhibition	-	4000
Boots of Speed	30000	1200	Angel Wings	-	4000
			Sword of Judgement	-	4000
SPECIAL			Helm of Heavenly Enlightenment	-	4800
Scroll	-	500	Orb of Vulnerability	-	5000
			Spellbinder's Hat	-	6000

Relic artifacts can never appear neither in Artifact Merchant or Black Market.

Experience gained by sacrificing artifacts on the Altar of Sacrifice

Treasure	1000
Minor	1500
Major	3000
Relic	6000
Scroll	0

Experience gained by sacrificing creatures on the Altar of Sacrifice

Azure Dragon	9855	Troll	125	Dragon Fly	35
Crystal Dragon	4915	Master Genie	115	Water Elemental	35
Rust Dragon	3300	Genie	110	Stone Golem	30
Faerie Dragon	2445	Gorgon	110	Magog	30
Archangel	1095	Lich	105	Wight	30
Black Dragon	1090	Dendroid Soldier	100	Orc Chieftain	30
Gold Dragon	1075	Minotaur	100	Serpent Fly	30
Titan	935	Pit Fiend	95	Mummy	30
Archdevil	885	Vampire Lord	95	Battle Dwarf	25
Phoenix	840	Diamond Golem	95	Wood Elf	25
Ancient Behemoth	770	Zealot	90	Obsidian Gargoyle	25
Chaos Hydra	740	Archmage	85	Harpy Hag	25
Devil	635	Greater Basilisk	85	Wolf Raider	25
Angel	625	Ogre Mage	80	Marksman	20
Green Dragon	605	Gold Golem	75	Stone gargoyle	20
Ghost Dragon	585	Crusader	70	Orc	20
Red Dragon	585	Mage	70	Archer	15
Firebird	565	Medusa Queen	70	Centaur Captain	15
Hydra	515	Sharpshooter	70	Dwarf	15
Giant	460	Silver Pegasi	65	Gog	15
Bone Dragon	420	Vampire	65	Zombie	15
Behemoth	395	Basilisk	65	Harpy	15
Naga Queen	355	Monk	60	Wolf Rider	15

Dread Knight	295	Pegasi	60	Lizardman	15
Champion	260	Dendroid Guard	60	Lizard Warrior	15
Black Knight	260	Horned Demon	60	Rogue	15
War Unicorn	250	Medusa	60	Boar Rider	15
Naga	250	Storm Elemental	60	Pikeman	10
Magic Elemental	250	Magma Elemental	60	Halberdier	10
Cavalier	240	Royal Griffin	55	Centaur	10
Efreet Sultan	230	Swordsman	55	Skeleton Warrior	10
Unicorn	225	Demon	55	Walking Dead	10
Efreet	205	Energy Elemental	55	Infernal Troglodyte	10
Psychic Elemental	205	Iron Golem	50	Gnoll Marauder	10
Scorpicore	195	Ogre	50	Sprite	10
Manticore	190	Cerberi	45	Gremlin	5
Wyvern Monarch	185	Evil Eye	45	Master Gremlin	5
Cyclops King	180	Ice Elemental	45	Imp	5
Wyvern	165	Griffin	40	Familiar	5
Cyclops	155	Grand Elf	40	Skeleton	5
Pit Lord	150	Hell Hound	40	Troglodyte	5
Enchanter	150	Beholder	40	Goblin	5
Thunderbird	135	Air Elemental	40	Hobgoblin	5
Power Lich	130	Fire Elemental	40	Gnoll	5
Minotaur King	130	Earth Elemental	40	Pixie	5
Roc	125	Nomad	40	Halfling	5
Mighty Gorgon	125	Wraith	35	Peasant	0

Peasant value of 0 truly means that even if you sacrifice 10000 Peasants - you will gain 0 experience.

Learning skill increases experience gained on Altar of Sacrifice, both for artifacts and creatures.

Freelancer's Guild

Marketplaces	Selling price in [%] in gold
1	30
2	45
3	50
4	65
5	70
6	85
7	90
8+	100

Wood/Ore gained per creature sold are calculated as:

Unit purchase price / 250 * Modifier from the table above

Other resources gained per creature sold are calculated as:

Unit purchase price / 500 * Modifier from the table above

Calculations are rounded down.

Freelancer's Guild on the adventure map offers the same exchange rate as when possessing 5 Marketplaces.

It can be used in case of unwanted units (like from level 1 dwellings). E.g. 28 Pikemen (2 week growth) may be exchanged, in case of 3 Marketplaces, for 840 Gold, 3 Wood/Ore, 1 other.

PHOENIX' REBIRTH SPECIALTY

A fraction of the total number of Phoenixes will be resurrected when the stack is destroyed once per battle; exact formula is 20% probability per Phoenix of reviving one Phoenix; i.e. 1 Phoenix grants a 20% probability to have 1 Phoenix revived, 4 Phoenixes grants an 80% probability to have one Phoenix revived, 5 Phoenixes automatically revives one Phoenix, 7 Phoenixes automatically brings one back to life with a 40% probability of reviving a 2nd.

FAERIE DRAGON'S SPECIALTY

Each Faerie Dragon stack can cast up to 5 spells per combat. All spells are cast at Advanced expertise and with a Spell Power equaling five times the number of Dragons in the stack. Spells are chosen randomly.

Spell	Spell probability [%]	Spell damage
Ice Bolt	22	20 + 100 * Faerie Dragons
Lightning	22	20 + 125 * Faerie Dragons
Fireball	21	30 + 50 * Faerie Dragons
Magic Arrow	10	20 + 50 * Faerie Dragons
Frost Ring	10	30 + 50 * Faerie Dragons
Inferno	5	40 + 50 * Faerie Dragons
Meteor Shower	5	50 + 125 * Faerie Dragons
Chain Lightning	5	50 + 200 * Faerie Dragons

Magic Arrow can be cast in Anti-Magic Garrison, on Cursed Ground, and with Orb of Inhibition present.

All other spells can be cast in Anti-Magic Garrison (using F key) and with Orb of Inhibition present. On Cursed Ground all spells except Magic Arrow either cannot be cast (target spells) or will not do any damage (area spells).

Faerie Dragons have a permanent Magic Mirror cast on themselves (with, likely, 30% deflection probability). It will reflect the hostile spell, but not if it was cast by the opponent's Faerie Dragon or if it is a mass or area spell. It will not reflect a hostile spell if there is no valid target for it in the opposing army (e.g. Blind if fighting Undead).

PIT LORD'S SUMMON DEMON SPECIALTY

One Pit Lord raises 50 HP, which equals 10/7 Demons (1.42857).

The number of Demons raised is rounded down.

If there is insufficient HP in the dead stack, you will not use the ability up to its full potential. The easy way to calculate this is:

$50 * \text{Pit Lords} \geq \text{HP destroyed}$.

If true, you will raise the maximum possible number of Demons.

Maximum number of Demons cannot exceed creatures lost, so you cannot revive more than 7 Demons from 7 Cavaliers for instance.

You can only raise living creatures.

Summon Demon is a level 2 spell.

Cloned Pit Lord stack can use the specialty as well.

+Life artifacts are helpful (you need less creatures to produce same results).

Raising Demons from a stack that was poisoned when it died will yield less Demons than normal - the reduced HP of the dead stack is taken into account. However, this is not the case when raising Demons from an aged stack - you will gain the same amount of Demons as from a non aged stack.

If there are no +Life artifacts present you need 8,75 times Imps compared to Pit Lords, 2,7 times Gogs or 1,4 times Hell Hounds to achieve maximum results. If the ratio is higher, surplus will go to waste. The exact general info is shown in this table:

Pit Lords	Raised Demons	Number of creatures required to raise the correspondent number of Demons based on creature's HP																
		HP = 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	9	7	6	5	5	4	4	4	3	3	3	3	3	2	2	2	
2	2	18	14	12	10	9	8	7	7	6	6	5	5	5	4	4	4	
3	3	27	21	18	15	14	12	11	10	9	9	8	7	7	6	6	6	
	4	35	28	24	20	18	16	14	13	12	11	10	10	9	9	8	8	
4	5	44	35	30	25	22	20	18	16	15	14	13	12	11	10	10	9	
5	6	53	42	35	30	27	24	21	20	18	17	15	14	14	13	12	12	
	7	62	49	41	35	31	28	25	23	21	19	18	17	16	15	14	13	
6	8	70	56	47	40	35	32	28	26	24	22	20	19	18	17	16	15	
7	9	79	63	53	45	40	35	32	29	27	25	23	21	20	19	18	17	
	10	88	70	59	50	44	39	35	32	30	27	25	24	22	21	20	19	
8	11	97	77	65	55	49	43	39	35	33	30	28	26	25	23	22	21	
9	12	105	84	70	60	53	47	42	39	35	33	30	28	27	25	24	23	
10	13	114	91	76	65	57	51	46	42	38	35	33	31	29	27	26	24	
	14	123	98	82	70	62	55	49	45	41	38	35	33	31	29	28	26	
11	15	132	105	88	75	66	59	53	48	44	41	38	35	33	31	30	28	
12	16	140	112	94	80	70	63	56	51	47	44	40	38	35	33	32	30	
	17	149	119	100	85	75	67	60	55	50	46	43	40	38	35	34	32	
13	18	158	126	105	90	79	70	63	58	53	49	45	42	40	38	35	34	
14	19	167	133	111	95	84	74	67	61	56	52	48	45	42	40	37	35	
	20	175	140	117	100	88	78	70	64	59	54	50	47	44	42	39	37	
15	21	184	147	123	105	92	82	74	67	62	57	53	49	46	44	41	39	
16	22	193	154	129	110	97	86	77	70	65	60	55	52	49	46	43	41	
17	23	202	161	135	115	101	90	81	74	68	62	58	54	51	48	45	43	
	24	210	168	140	120	105	94	84	77	70	65	60	56	53	50	47	45	
18	25	219	175	146	125	110	98	88	80	73	68	63	59	55	52	49	47	
19	26	228	182	152	130	114	102	91	83	76	70	65	61	57	54	51	48	
	27	237	189	158	135	119	105	95	86	79	73	68	63	60	56	53	50	
20	28	245	196	164	140	123	109	98	90	82	76	70	66	62	58	55	52	
21	29	254	203	170	145	127	113	102	93	85	79	73	68	64	60	57	54	
	30	263	210	175	150	132	117	105	96	88	81	75	70	66	62	59	56	

Every neutral town starts with level 1 and 2 buildings prebuilt. Those troops should be used for Demon farming if possible.

RULES OF TURN ORDER

Every round is composed of four parts, in proper order:

1. Normal phase
2. War Machine phase
3. Morale phase
4. Wait phase

NORMAL PHASE

Creatures play in decreasing order of speed.

If there is a speed tie among opposing units then player's A unit will play first if player's B unit has played just before and vice versa. Further turn order simply alternates between units of player's A and B (alternating rule).

This is true in all cases except the beginning of the 1st round where the attacker always plays first in case of a speed tie.

For all other rounds the rule holds: if A played last in previous round, B will play first in the next in case of a speed tie. War Machines are a factor in this case, even if they are not under player's control.

If there is a speed tie among units in the same army turn order is determined by left slot rule.

WAR MACHINE PHASE

Ballistas always play before First Aid Tents (left slot rule). Ammo Carts are irrelevant.

If player's A unit has played just before then player's B Ballista will play first and vice versa.

If player possesses Artillery and/or First Aid skills he may wait with Ballista/First Aid Tent. Again the turn order simply alternates, for the wait part for War Machines follows immediately.

MORALE PHASE

Units that receive morale in the normal phase and wait instead of acting play here, starting from the first unit that received morale. Turn order of this phase cannot be changed by any speed affecting spell.

WAIT PHASE

Creatures play in increasing order of speed.

If there is a speed tie among opposing units then player's A unit will play first if player's B unit has played just before and vice versa. Further turn order simply alternates between units of player's A and B.

If there is a speed tie among units in the same army turn order is determined by left slot rule (so, not opposite, but the same as in normal phase).

SPECIAL CASE: TOWN SIEGE WHEN FORT, CITADEL OR CASTLE BUILT

Turrets always play before the attacker's Catapult; Artillery and Ballistics skills are irrelevant.

If the Turret waits it will take its turn in War Machine phase.

If the Catapult waits it will take its turn in War Machine phase.

PECULIARITIES

If the unit is unblinded/resurrected/unpetrified (no matter when it was blinded/killed/petrified) it will take its turn as soon it is of highest speed if it is a normal phase, or of slowest speed if it is a wait phase. Alternating and left slot rule apply normally.

If a unit makes a move (or gets bad morale) and is killed and resurrected it will not play again in the same round.

Cloned unit will follow the alternating rule, but it will not follow the left slot rule: if there is a speed tie between 2 or more stacks in the same army, and Clone is cast on either of them, cloned stack will play after all other stacks have played.

BATTLE PREPARATION

WHAT YOU SHOULD DO BEFORE THE START OF EVERY IMPORTANT BATTLE VS. HUMAN

- check his troop arrangement and answer properly with yours. E.g. if he has Mighty Gorgons on the left, and you know or suspect he will have a chance to hit your Behemoths because he has initiative, (mass) Haste or Tactics advantage, place your Behemoths on the right.
- use your advantages. E.g. Stronghold vs Stronghold where you have initiative, but do not know will you have Tactics advantage. If you plan to cast Mass Haste and attack immediately position your troops so that all can attack important target, like Ancient Behemoths. If you don't have all slots of relevant creatures full, split your Thunderbirds into 2 stacks, one with just 1 Thunderbird, so that 1 Thunderbird takes Behemoths retaliation. Then, if played right, you can continue with Thunderbirds, Ancient Behemoths and Wolf Riders on the Behemoths, giving you big edge in battle from the start.
- if you have Visions cast them: check the stats, morale, luck and mana. E.g. if he has 3 Luck and you have 1 but also possess the Hourglass of the Evil Hour, equip it. If you see he has neutral morale, but all the same town units in army, it's almost certain he wears Spirit of Oppression. If he is low on mana, and is still going for you, you can suspect that he wears Recanter's Cloack or Orb of Inhibition. If you don't have Visions check the above at the start of the battle.

WHEN THE BATTLE BEGINS

- check the speeds and hit points of all units.
- check for changes in morale and luck to discover the Hourglass of the Evil Hour and Spirit of Oppression.
- check for the presence of Orb of Inhibition and Recanter's Cloack by selecting (but not playing) a non mass spell of the appropriate level.
- check for the presence of any spell specific hindering artifacts (always check Berserk, Blind, (Chain) Lightning and Forgetfulness if they are important to you).
- check for the presence of the Sphere of Permanence when you're able, but only if you do not have Expert Water.
- check for the presence of the Badge of Courage by selecting (but not playing) a hostile Mind spell.
- check for the presence of Shackles of War.
- when you are able, calculate or determine does he have Armorer, Offense, Archery skills, Golden Bow, Bow of the Sharpshooter.

DURING THE BATTLE

- you must always know the turn order one round in advance and be prepared for changes caused by spells.
- keep track of when every spell was cast and when will it expire.
- keep track of the damage caused by his spells to see are they enchanted and estimate his Magic school level based on damage of the spell cast (or other non damage, e.g. Resurrection).
- estimate his level in schools of magic based on spells he casts.
- keep track of yours and his mana pool.

BATTLE TACTICS, INFO AND TIPS

A clever way to get creatures that outspeed you forward without waiting is to block your powerstack by single slow fodder units. The AI thinks you can't hit it, since your power stack is blocked and your fodder can't reach, and moves forward. Then you can move the fodder and smack it with your power stack. The AI doesn't seem to worry about whether its hit by a full shot or a half shot so your archers can benefit from this too.

If you are fighting some wandering Dendroids berserk one of the stacks and the two will bind each other forever, so that you can easily shoot them down.

Attacking an Elemental of the opposite type does twice the damage.

The only Elemental that flies is Energy Elemental.

Master Genie will always cast Magic Mirror on Gold Dragons.

Storm Elementals have melee penalty, although it is not mentioned in their stats.

Turrets aim mostly at shooters, so some fodder shooter stack can be used. If there are empty slots then you should divide the shooters (numbers are irrelevant), and the Turrets will not aim to maximize damage by shooting other stacks, but will shoot the shooter stack instead. Turrets have a priority to shoot lower stacks, so you should place shooter foddors all right in your hero screen army formation.

Turrets will always target clones as soon as possible.

If the opponent has Expert Tactics he can never deploy his shooter stack in a way to cover both opposite corners, you will always be able to place a 1-hex unit (only) in one of those corners, and it will receive half the damage.

There is a limit to the number of units on the battlefield, including summons, war machines, clones and dead troops, and it equals 20 for both sides. When the number reached it is not possible to clone, summon Demons/Elementals or resurrect dead stacks. In reality, this situation may occur only in Elemental fights.

ARROW TURRETS

All towns' turrets do the same damage. If Fort, Citadel or Castle is built damage of the Middle turret is 15, and 7,5 for others.

Buildings increase turrets' damage, but only those buildings that are new in town view, not upgrades to the existing. So, every building save:

- dwellings' upgrades
- Mage Guild upgrades
- Horde buildings
- income upgrades
- some special ones

increases middle Turret damage by 3, and 1,5 for the other two.

Damage is almost always the maximum one (right click on the Turret), sometimes +1/2 points, and it does not depend on the target. Nothing can influence it, except the mentioned above (but it will be roughly double if the defender has Armorer or Air Shield).

Maximum damage for Castle, Conflux is 120, Necropolis, Inferno, Fortress 125, Stronghold, Turret, and Dungeon 130 (for all three Turrets).

Artillery allows the player to control Turrets.

CATAPULT AND BALLISTICS

Ballistics level	Main Turret	Chance to hit			Damage probability		
		Side Turrets	Gateway	Wall	0 HP	1 HP	2 HP
-	5%	10%	25%	50%	10%	60%	30%
Bas	7%	15%	30%	60%	0%	50%	50%
Adv	7%	15%	30%	60%	0%	50%	50%
Exp	10%	20%	40%	75%	0%	0%	100%

If the enemy has any troops that are native to the terrain all of the Quicksand pits/Land mines are visible to him.

You don't need to have Advanced Earth to be able to use the Resurrection properly. If you keep resurrecting your Angels (for instance) you will only lose the amount of Angels that you came into Utopia with compared to the lowest number they were during fight. I.e. if you have 5 Angels, lose 1, resurrect that one and lose it again and resurrect it again and use this tactic the entire battle you will only lose 1 Angel.

It is not always necessary to dispel or cure your blinded unit. There are other ways to unblind it, some of which are: Death Ripple, Meteor Shower, Inferno, Chain Lightning, Double breath attack etc.

Defending increases troop's Defense by 20% until the troop's next turn (even if blinded, extra defense will expire properly).

Rogue in army enables the hero Expert Visions knowledge when right clicking.

The AI can retreat even if all of his stacks are blinded if he possesses a Ballista or First Aid Tent that has a unit to heal. AI can't retreat if he has Ammo Cart only. Artillery skill is irrelevant.

If you left click on your unit and then hover the cursor over the active spell you will see for how many more rounds will it last.

You can switch off Tactics. Use this to fool your opponent.

The number of stacks you will face depends on the strength of your army and the tile the battle takes place:

Army's strength compared to enemy	Enemy stacks in battle based on tile type		
0 – 50%	7	7	6
50 – 67%	7	6	5
67 – 100%	6	5	4
100 – 150%	5	4	3
150 – 200%	4	3	2
> 200%	3	2	1

So, if you attack only with 1 fodder and see 6 stacks it means you are facing 3rd column formation, so you can calculate more precisely what you are going to face with your main army.

If a unit stands or dies on top of a dead unit, the latter's corpse cannot be used for any spell effect.

If there are no upgraded creatures, the rule for turn order of units in Imp Cache, Dwarven Treasury etc. is:

4 1
 5
3 2

If you destroy one of the stacks, e.g. stack 1, and retreat or lose, then on the next attack 2 will take the place of 1, 3 the place of 2 and so on, while 5 will remain empty.

There is a 50% probability for an upgraded stack to appear in Stores, Banks, Treasuries, Caches. It will always appear at position 3.

When you attack wandering troops there is 50% chance that one stack will be of upgraded type. Since stack number depends on armies' strength relation, it is not always wise to bring in everything with you into the fight. E.g. you fight 12 Reds. If they split into 7 stacks you will have to deal with only 2 Blacks, but if they split into two stacks you will deal with 6 Black Dragons.

Town's defending troops always has +1 A/D/speed bonus for fighting on native terrain, no matter the actual type of terrain the town is on. Attacker troops will receive the bonus if they are of the same type as the defending town.

You cannot open a town gate with a hypnotized unit.

AI will rather hit your Imps than your Gogs.

Pikemen and Halberdiers take no extra damage from Cavalry and Champion's jousting bonus.

Dread Knight has a 1/40 probability for a Lucky Double Strike when Luck = 3.

MOAT

You only take damage when you go into, or end a turn in a moat. There is no way to avoid moat damage; no magic, immunity or resistance helps, except the following:

- Spell casters (or their clones) can cast and avoid damage,
- You can get bad morale,
- You can leave the moat.
- A unit teleported into the moat will not take damage (only via Teleport spell).
- Blinded unit will not take damage.

Hot moat types deal 90 damage (Fortress, Dungeon, Inferno), others 70.

Creatures in a moat take 10% extra physical damage if attacked.

Defending creatures are not immune to moat effects.

TOWER LAND MINES

Tower Land Mines do $10 * SP + Adv Fire = 10 * 10 + 50 = 150$. They do more damage if hero's stats allow it. E.g. hero with SP 12 and Exp Fire will cause the mines to explode with $10 * 12 + 100 = 220$.

Mines' damage is affected by Orb of Tempestuous Fire (+50%).

Protection from Fire spell reduces damage appropriately, as does magic damage reduction of certain creatures.

Mines can be dispelled.

Creatures resistant or immune to Fire or level 3 spells are not affected.

Advanced Anti-magic and Recanter's Cloak grant immunity.

Allied creatures are always immune, no matter their alignment.

Only when a creature moves onto a mine or ends its turn there it explodes. Teleporting a unit onto it will not cause explosion. Arch Devils do not teleport in this sense.

It is impossible to fully destroy the upper and lower Turret. Units behind them always have 50% wall damage reduction.

The regeneration ability acquired through the Elixir of Life regenerates 50 HP when the stack gets its turn (if possible).

If there is a visiting hero and no hero inside Garrison armies are merged into the hero's army. What cannot be merged is unused. If attacked and the defender wins the battle, the unused Garrison armies are still there, if he loses, they're lost without fight.

Unlike the above, if you place troops in a mine, and position your hero on that mine, if attacked the armies will not join.

When an AI hero is coming, place a strong hero with an army able to beat the AI in the castle. Distribute the units - half of them in the town, half of them with the visiting hero. The AI will 'think' it

has to do two fights and can win both of them. But what will happen is - your hero is placed in the town and there is only one fight. If setup properly the AI will be beaten.

Cyclops can attack fortifications with Basic Ballistics efficiency even if they are surrounded by adjacent enemy unit. Cyclops Kings shoot at Advanced Ballistics efficiency.

Placing a 2-hex unit in front of a berserked 1 or 2-hex creature will cause it to freeze, unless the berserked creature is within range of other potential targets. This is not the case in fight vs. human, only vs. neutrals.

If you are facing a big force (6 or 7 stacks) of 2-hex creatures and have Expert Earth magic a smart thing to do is to cast Force Field at the second row of the right. It will grow to the top of the map, effectively blocking 2 or 3 stacks for two turns. They can't move because they need a 2 hexes hole to get through. An Expert Earth Force Field at both sides of an obstacle in the middle can block the entire enemy force from reaching your stacks.

Ballistae never run out of shots, although its stats say that it has 24.

FORMATIONS

There are two types of formations: Loose and Tight. Troop arrangement depends on selected formation and number of stacks. For stacks 7, 6 and 1 arrangement is the same for both formations:



Loose formation for 5, 4, 3, 2 stacks:



Tight formation for 5, 4, 3, 2 stacks:



Note that only the order of creature stacks matters for determining their placement, not the actual army slots they occupy on the Hero Screen. Consider three stacks of creatures, say Gargoyles, Golems, and Mages, in this order from left to right as they appear on the hero screen. The Golems are always placed on the central map position, regardless of whether or not they occupy the central army slot. Likewise, the placement of the Gargoyles and the Mages (on neighboring or on remote positions) is determined only by the selected formation, not by the actual army slots they occupy.

You can't close the gate after something has fallen dead on it. You can't open a gate if something has fallen dead under it.

If a petrified unit gets morale you can still get a turn with it the same round if you cure or dispel it.

You can clone a stack standing in the moat, and the clone can appear in the moat without receiving damage.

AI controlled Harpy (Hags) will sometimes try to block shooters, including Ballistae or Catapults, without attacking them, and after they succeed in that will they begin attacking.

AI stacks will go for the nearest creature (that is out of reach) unless there is a ranged creature within 2 rounds movement.

AI will almost never wait if it can attack (it may wait in case it cannot avoid a friendly Firebreath, or in case of a massive retaliation etc). This is very useful in many cases, especially in the beginning of combat if you have Tactics.

If your shooter stack is not blocked AI will attack it if possible, unless there is another stack which he can attack and block the shooters (of course, it must not die or receive large damage from retaliation, among else. In general, AI will attack either the shooters or the meelers considering retaliation damage).

If you don't have Earth magic but win with only your resurrected stack on the field you get to keep one unit of the stack. If you win with more than one resurrected stack the most left slot resurrected stays post battle, others disappear.

In special locations (Utopias, Crypts, Stores etc.) your units will appear in 3 centered rows in this disposition (based on your unit's slots numbered from left to right on your hero's screen):

```
  1  2
 3  4  5
  6  7
```

If you have less than 7 stacks, you will not occupy the higher numbers.

Psychic Elemental does half damage to:	Magic Elemental does half damage to:
Units immune/resistant to Mind spells	Black Dragon
	Magic Elemental

Send out waves of expendable heroes against a dangerous invader, each with 7*1 Wraith stacks, with the aim of reducing his spell points. You will need lots of extra gold of course to make this work. It is easily countered by Destroy Undead, except if you have the Pendant of Death. But even getting your enemy to cast Destroy Undead over and over is going to cause him to lose spell points.

You can block an open drawbridge with Force Field.

When all your creatures are dead your clones will disappear, but summoned Elementals will keep fighting to the end.

Breath attack works differently for the first hex and the second hex, damage is calculated separately (even base damage is rerolled) and Luck bonus applies for first hex only.

If you deal enough damage in a single blow to kill both the targeted Phoenixes stack and the one that would normally rise from their ashes, their Rebirth ability won't even happen at all.

If you have no other creatures/War Machines left standing, your stack of Phoenixes will have 0% chances at Rebirth (not the case for neutrals and AI). It is therefore prudent to try to kill the Phoenixes last.

Phoenix' Rebirth removes any spells affecting them (as does any resurrecting spell). The revived stack may receive good morale in the same turn (e.g. the Phoenix attacks, is killed by retaliating creature, is reborn, receives good morale).

If your Archangels, Archdevils or Ghost Dragons die in battle, their morale and luck specialties still work. Similar, even if you kill your opponent's Arch Mage, he will still pay -2 mana to cast spells, and if you kill your opponent's Silver Pegasi, you will still have to pay +2 mana to cast spells.

In a Utopia, the Dragons already have mixed alignment, so bringing a Ghost/Bone Dragon inside can cause them to freeze.

The Spirit of Oppression does not negate negative morale.

Minotaur (Kings) can never have less than +1 Morale, even with mixed town types or if Sorrow is cast, unless Spirit of Oppression is present.

Catapult is always (even with the Orb of Vulnerability present) immune to Implosion and Mind spells.

If you wait with Faerie Dragons their spell may change.

Harpies attacking Dendroids will get bound after they have returned to their original position.

By pressing the Autocombat key during the tactics phase AI will move your 2-hex creatures one step further (which he does regularly with his own troops).

A spell will affect a creature only if it creates a greenish outline on it.

Expert Earth Remove Obstacle spell can be used to search for Land Mines, and then canceled to save mana for more important things.

With Remove Obstacles you can destroy Land Mines, Firewalls and Force Fields. But you can't remove Walls or obstacles that cross the field.

Base price when surrendering is half the army's cost in gold. This can be further reduced via Diplomacy and Artifacts to a total of 5% of normal price.

Fights inside a Mine will always have subterranean battle terrain.

The entire underground will have a subterranean terrain in battle, regardless of what you see on the adventure map. But the movement penalties aren't affected.

These tips are perhaps mostly useful for Luna (Firewall spell), but work in general:

- Enemies in front of your unit will approach you directly.
- Enemies above your unit tend to walk down to one row above the unit before proceeding forward.
- Enemies below you rather walk forward and then upwards.

SPELL TACTICS AND TIPS

Each time you cast Earthquake it does 1 damage to 4 different sections of the besieged town. However, Earthquake never hits the same section in the same cast twice, so, when you attack a town that has only a Fort you will break a wall in one cast because walls only have 1 HP.

When you attack a town that has a Citadel/Castle built, it is still possible that a wall section falls down after you cast Earthquake only once, but only if the same section was also hit by your Catapult (or one of your Cyclopes) prior.

Land Mines affect only non native creatures, no matter the caster. You cannot even cast the spell if all the units involved are native to the terrain they fought on.

Resurrected previously fully dead stack is purged from all spells.

If a stack of casting creatures has already used all their casts, was fully killed and then resurrected, it will still not be able to cast.

For Resurrection (spell or Archangel's specialty) to work, it must be able to resurrect at least the number of HP of one killed creature. So, if you had 3 Azure Dragons, lost 1 and the second has 500 HP, you cannot resurrect if you have a 999 HP Resurrection, you need 1000 HP minimum, that is, 10 Archangels.

Resurrection and Animate Dead spells are of less value with +Life artifacts (less creatures are revived).

If you cast Prayer on an already Advanced Slowed creature, it adds only +2 speed, not +4. Therefore Prayer and Slow do not cancel each other, e.g. a Zealot of speed 7 when expert slowed will have speed 3, but only speed 5 if expert prayed.

So, speed of the creature both slowed and prayed is calculated:

$\text{rounddown}(\text{Base speed} * \text{Slow penalty}) + \text{rounddown}(\text{Prayer bonus} * \text{Slow penalty})$

However, if u cast Haste or Cure next turn, the Prayer spell reveals its full potential and adds the missing +2 speed as well.

Disrupting Ray is undispellable by anything; it lasts as long as the affected stack does.

Titan's Thunder special lightning spell can only be enhanced by an Orb of Firmament and/or Sorcery secondary skill and specialty. Nothing else enhances the spell, but creature vulnerabilities do apply: Air and Storm Elementals receive twice the damage.

It is a level 5 spell.

When equipped it permanently adds a Spell Book if the hero does not possess one (you may remove it afterwards).

You cannot resurrect Gold Dragons with Sacrifice because the resurrecting part is a level 4 spell.

Counterstrike, even if dispelled, will continue to work until the end of the round.

Teleport is the only spell that gets cheaper with the Advanced and Expert skill as well. Normally it costs 15 spell points, with Basic Water magic 12, with Advanced 6 and with Expert 3. And if you have Magi among your troops you can get it to 1.

Advanced Forgetfulness is a mass spell (bug). Also, Forgetfulness adds melee penalty to shooters that do not have one.

Hypnotized creatures' special abilities still work.

Curse spell description incorrectly states that it reduces base damage to: $[(80\% \text{ of minimum damage}) - 1]$. It actually reduces it to (minimum damage - 1), down to a minimum of 1.

FORCE FIELD

It lasts only 2 rounds always, regardless of SP and Earth magic expertise. On Advanced it becomes 3-hex long making it possible to protect a 2-hex unit from other 2-hex units on the attacker's side of the field.

FRENZY

Lasts right until the targeted unit's second turn from now. Even if the unit is blinded while frenzied the spell will still expire properly.

DISPEL

No creature is immune to Dispel. It can be prevented only with the Orb of Permanence of the Power of the Dragon Father.

It is always possible to terminate spells on own units, Water school not being a factor.

It is not possible at all to dispel any spell on enemy units with Basic Dispel.

Advanced Dispel on the other hand terminates any spell, of any level and expertise, on any creature.

The only spell being the exception is Disrupting Ray.

The only creature spell/ability being the exception is Wyvern Monarch's Poison.

CURE

It is always possible to terminate hostile spells on own units, Water school not being a factor.

The only spell being the exception is Disrupting Ray.

The only creature spell/ability being the exception is Dendroid's Binding.

CLONE

You can't have more than one clone at a time for any given stack of creatures.

Clones have exactly the same special abilities as their originals (whatever stack a Ghost Dragon Clone ages will remain aged even after the clone disappears, and so on). There is one exception: an Efreeti Sultan's clone will not appear with Fire Shield.

Clones are immune to the retaliatory damage of Fire Shield.

Shooter clones will always be cast with maximum number of shots.

Clones are affected by hero's skills, stats, morale (if applicable), luck and artifacts just like the original creatures.

A clone won't appear with any spell on it, neither beneficial nor negative.

A clone will always appear at full health.

All spells applicable to a creature will work fine on its clone except Anti-magic, Animate Dead, Resurrect, Sacrifice and Clone.

Opponent's clones do not count for experience.

Opponent's clones do count for necromancy calculations, but only up to one clone for each stack.

Necromancy will also be calculated in case the clone remains as the last unit in opponent's army and if the original unit is killed (therefore terminating the clone), but will not be calculated if clone disappears for SP (duration) reasons.

Clone lasts as many rounds as caster's SP or until the original unit is killed.

You can clone level 8-10 units with Expert Water Clone.

If you cast Clone and there is no space to place the cloned stack, clone will not appear and the original stack will disappear if taken damage because it became its own clone.

BERSERK

Sometimes the unit doesn't move at all, even if another unit is next to it. If that happens, it is still berserked the next round.

If there are no units within range, sometimes the berserked unit moves toward another unit, sometimes it doesn't.

Sometimes the unit will move toward another unit one round, but not the next.

When the unit doesn't move, the text box doesn't show it defended or waited either one. It doesn't show anything at all for that unit.

One time the unit didn't move and nothing showed in the text box. But the unit got morale which did show in the text box saying '.....attacks again'. But the unit just stood there and nothing else showed in the text box (and they remained berserked).

When they don't move, they do not get the 20% defense bonus like they would when defending.

The berserk spell doesn't expire (or at least it lasts longer than 1 round per Spell Power).

IMMUNITIES AND RESISTANCES. UNITS' ABILITIES

If player A has the Orb of Vulnerability all resistances are negated when player A casts spells. When player B casts spells only troops that player A owns lose their resistances.

The Orb does not affect damage reductions that some creatures have (e.g. Titans still take half damage from Psychic Elementals and Golems still retain spell damage reduction).

Spells Anti-Magic and Protection from provide protection with Orb present.

Immunities are bolded and are not negated by Orb of Vulnerability; resistances, however, are. If the resistance percentage is unmentioned it is 100%.

Some creature abilities cannot be resisted by any creature, and are not mentioned individually for each creature: see section's bottom for the list.

IMMUNITIES/RESISTANCES BY CREATURE

LIVING CREATURES

They have non-neutral morale.

All living creatures are immune to Destroy Undead and Animate Dead.

DWARVES AND BATTLE DWARVES

Resistance: Dwarves have 20% probability to resist all hostile hero cast spells except Firewall, Quicksand and Land Mine, while Battle Dwarves have 40%. Of creature abilities they resist (with the same probability) Thunderbird's Lightning Strike, (War) Unicorn's Blind, Zombie's Disease, Enchanter's Slow and Weakness, Black (Dread) Knight and Mummy's Curse and Dragon (Serpent) Fly's Weakness.

UNICORNS AND WAR UNICORNS

Immunity: 20% probability to protect adjacent allies from all hostile hero cast spells except Firewall, Quicksand and Land Mine. Also grants immunity (with the same probability) to Thunderbird's Lightning Strike, (War) Unicorn's Blind, Zombie's Disease, Enchanter's Slow and Weakness, Black (Dread) Knight and Mummy's Curse and Dragon (Serpent) Fly's Weakness.

Multiple auras are redundant.

Unlike all other resistance sources, it is not cumulative, but multiplicative.

GREEN AND GOLD DRAGONS

Resistance: Green Dragons resist all level 0-3 spells except Dispel and Mighty Gorgon's Death Stare. Gold Dragons resist all level 0-4 spells except Dispel, Efreet Sultan's Fire Shield and Mighty Gorgon's Death Stare.

GIANTS AND TITANS

Resistance: Resist all Mind spells.

EFREETS AND EFREET SULTANS

Resistance: Resist all Fire spells.

Immunity: Efreet Sultan's Fire Shield.

TROGLODYTES AND INFERNAL TROGLODYTES

Immunity: Blind and Petrify.

RED AND BLACK DRAGONS

Resistance: Red Dragons resist all level 0-3 spells except Dispel and Mighty Gorgon's Death Stare. Black Dragons resist all level 0-5 spells except Dispel, Efreet Sultan's Fire Shield and Mighty Gorgon's Death Stare.

FIREBIRDS AND PHOENIXES

Resistance: Resist all Fire spells.

Immunity: Efreet Sultan's Fire Shield.

CRYSTAL DRAGONS

Resistance: Crystal Dragons have 20% probability to resist all hostile spells except Firewall, Quicksand and Land Mine. Of creature abilities they resist (with the same probability) Thunderbird's Lightning Strike, (War) Unicorn's Blind, Zombie's Disease, Enchanter's Slow and Weakness, Black (Dread) Knight and Mummy's Curse and Dragon (Serpent) Fly's Weakness .

AZURE DRAGONS

Resistance: Resist all level 0-3 spells except Dispel and Mighty Gorgon's Death Stare.

Immunity: Azure Dragon's Fear.

UNLIVING CREATURES

Unliving creatures always have neutral morale (except Gargoyles). They are composed of Gargoyles, Golems and Elementals.

All unliving creatures are immune to Destroy Undead, Animate Dead, Resurrection, and Sacrifice.

They are also immune to the regeneration ability of the Elixir of Life.

Of creature abilities they are immune to Archangel's Resurrection, Ghost Dragon's Aging, Mighty Gorgon's Death Stare, Pit Lord's Demon Summoning, Power Lich's Death Cloud (only adjacent splash damage), Vampire Lord's Life Drain, Wyvern Monarch's Poison.

Gargoyles don't have any other immunities or resistances, but Golems and Elementals do.

GOLEMS

Resistance: All types of Golems resist all Mind spells, except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

AIR AND STORM ELEMENTALS

Resistance: Meteor Shower. All Mind spells, except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

Double damage from Lightning Bolt, Chain Lightning and Armageddon.

WATER AND ICE ELEMENTALS

Resistance: Ice Bolt, Frost Ring. All Mind spells, except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

Double damage from Fire spells except Fire Wall.

FIRE AND ENERGY ELEMENTALS

Resistance: All Fire spells. All Mind spells, except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow, Azure Dragon's Fear and Efreed Sultan's Fire Shield.

Double damage from Water spells.

EARTH AND MAGMA ELEMENTALS

Resistance: Lightning Bolt, Chain Lightning and Armageddon. All Mind spells, except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

Double damage from Meteor Shower.

PSYCHIC ELEMENTALS

Resistance: Psychic Elementals resist all Mind spells except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

MAGIC ELEMENTALS

Resistance: Magic Elementals resist all spells except Mirth and Sorrow.

Immunity: (Master Genie's) Mirth, Sorrow and Azure Dragon's Fear.

UNDEAD CREATURES

Undead Creatures are immune to some Mind spells (Blind, Mirth, Sorrow, Fear), and resist some others (Forgetfulness, Berserk, Hypnotize and Frenzy).

They are immune to Resurrection, Sacrifice, Death Ripple, Bless and Curse, and to the regeneration ability of the Elixir of Life.

Of creature abilities they are immune to Archangel's Resurrection, Azure Dragon's Fear, Black (Dread) Knight And Mummy's Curse, Enchanter's Bless, Ghost Dragon's Aging, Master Genie's Bless and Mirth, Mighty Gorgon's Death Stare, Pit Lord's Demon Summoning, Power Lich's Death Cloud (only adjacent splash damage), Vampire Lord's Life Drain, (War) Unicorn's Blind, Wyvern Monarch's Poison and Zombie's Disease.

They are:

SKELETONS and SKELETON WARRIORS

WALKING DEAD and ZOMBIES

WIGHTS and WRAITHS

VAMPIRES and VAMPIRE LORDS

LICHES and POWER LICHES

BLACK KNIGHTS and DREAD KNIGHTS

BONE DRAGONS and GHOST DRAGONS

MUMMIES

WAR MACHINES

Immunity: Mind spells, Bloodlust, Implosion, Clone, Teleport.

OTHER

All non shooters are immune to Forgetfulness and Precision.

IMMUNITIES BY CREATURE SPECIAL ABILITY. DESCRIPTION OF CREATURES' SPECIAL ABILITIES

ARCHANGEL'S RESURRECTION

Cast spell. Level 4. 100% appliance probability.

Resistance: Black and Gold Dragons

Immunity: Undead, Unliving

One cast per Archangel stack.

Cannot be cast on itself.

Resurrects 100 HP per Archangel.

Resurrected troops will remain after combat.

There must be enough Archangels to resurrect a full HP of the targeted unit for it to work.

Condition	Works
Anti-Magic Garrison	No
Cursed Ground	No
Orb of Inhibition	No
Recanter's Cloack	No

AZURE DRAGON'S FEAR

Instant resolving ability. Level 5 spell. 10% appliance probability.

Immunity: Azure Dragons, Undead, Golems, Elementals.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

BLACK (DREAD) KNIGHT AND MUMMY'S CURSE

Expiring ability. Level 1. 3 round duration. 20% appliance probability for Black (Dread) Knights, 50% for Mummies.

Resistance: Green/Gold Dragons, Red/Black Dragons, Azure Dragons, Efreet/Efreet Sultans, Fire/Energy Elementals, Firebirds/Phoenix, Magic Elementals , Crystal Dragons (20% probability), Dwarves (20%), Battle Dwarves (40%).

Immunity: Undead

Works like the spell Curse at Advanced level. On Magic Plains it works at Expert level, but it must first apply to the attacked troop. It does not apply at all if the attacked troop:

1. is killed
2. resists the spell
3. is already affected by Curse (even at Normal/Basic level)
4. is immune/resistant to Curse

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

DRAGON (SERPENT) FLY'S WEAKNESS

Expiring ability. Level 2. 100% appliance probability.

Resistance: Green/Gold Dragons, Red/Black Dragons, Azure Dragons, Magic Elementals, Crystal Dragons (20% probability), Dwarves (20%), Battle Dwarves (40%).

Works like the spell Weakness at Advanced level. On Magic Plains it works at Expert level, but it must first apply to the attacked troop. It does not apply at all if the attacked troop:

1. is killed
2. resists the spell
3. is already affected by Weakness (even at Normal/Basic level)
4. is immune/resistant to Weakness

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	No
Orb of Inhibition	Yes
Recanter's Cloack	Yes

DRAGON (SERPENT) FLY'S DISPEL

Instant resolving ability. Level 0. 100% appliance probability.

No creatures are immune to it and it can only be resisted by Sphere of Permanence or Power of the Dragon Father.

It will remove beneficial spells from enemy units (including any level of Anti-magic), but it will not remove negative ones (unlike normal Dispel).

Will not be cast as a mass spell on Magic Plains (the only spell that will not).

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

EFREET SULTAN'S FIRE SHIELD

Instant resolving ability. Level 4. 100% appliance probability.

Immunity: Efreet/Efreet Sultans, Fire/Energy Elementals, Firebirds/Phoenix, Clones

Equivalent to Basic Fire Fire Shield spell.

Damage to Golems is reduced according to the Golem type's spell damage reduction. Protection from Fire will also reduce the damage.

If the hero casts Fire Shield on a stack of Efreet Sultans the two Fire Shields do not both apply; you don't get two shields, the spell remains.

The damage of the Fire Shield is (Base damage) * $[1 + \sum (\text{Additional damage})]$, i.e. the damage that would be done if there were no damage reductions. Notice that this seriously hurts units with melee penalty since they'll deal half damage, so the Fire Shield returns a much larger percentage of the damage that was delivered.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

ELEMENTAL'S PROTECTION FROM SPELLS

Cast spell. Level 1-3. 6 round duration. 100% appliance probability.

Three casts per Elemental stack.

Spells are cast on Advanced level (50% protection).

Cannot be cast on itself (except as a mass spell on Magic Plains).

Condition	Works
Anti-Magic Garrison	No
Cursed Ground	No
Orb of Inhibition	No
Recanter's Cloack	No for Protection from Earth only

ENCHANTER'S CASTING

Cast spell. Level 1-2. 3 round duration. 100% appliance probability.

All Enchanter stacks will automatically cast at the same time, when the first stack of them gets a turn, every 3 rounds, starting from and including the first, a random mass spell: Slow, Haste, Stone Skin, Bless, Weakness, Air Shield. If the Enchanters miss to act for one or more rounds due to low morale the counter is preserved.

Air Shield will be cast only if fighting non blinded shooter with arrows left.

Every spell lasts for 3 rounds.

Condition	Works
Anti-Magic Garrison	No
Cursed Ground	No
Orb of Inhibition	No
Recanter's Cloack	No for Air Shield only

GHOST DRAGON'S AGING

Expiring ability. Level 5. 3 round duration. 20% appliance probability.

Resistance: Black Dragons

Immunity: Undead, Unliving

Reduces the target's HP by 50%.

Can be cured and dispelled.

Once it expires or is removed all creature in the stack including the top one is healed by the amount of base HP regained.

It is multiplicative with Wyvern Monarch's Poison.

Condition	Works
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Anti-Magic Garrison	Yes
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Cursed Ground	No
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Orb of Inhibition	Yes
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Recanter's Cloack	No
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MASTER GENIE'S CASTING

Cast spell.

Master Genies can cast any beneficial spell in the game. Spells are randomly cast, but with some peculiar restrictions (aside the usual ones like Dragon resistance etc.):

- Master Genies will not reapply the same spell twice if it's still active on the selected unit.
- Precision can be cast only on shooters with arrows left.
- Bloodlust can be cast on shooters only if they have no arrows left.
- Air Shield will be cast only if fighting non blinded shooter with arrows left.
- Anti-magic will never be cast versus neutrals (no matter if they can cast spells).
- Cure can be cast only on a wounded unit (you cannot hope to cure a blinded unit if it has full health). Always heals 50 HP.
- Slayer can be cast only if opposing Dragons, Behemoths or Hydras are present at the beginning of the battle.
- Magic Mirror will never be cast versus neutrals (no matter if they can cast spells).
- If you are fighting only ranged units Master Genies will never cast Bloodlust, Fire Shield or Shield on your ranged unit, unless it is adjacent to a hostile unit.
- If you are fighting only melee units Master Genies will never cast Bloodlust on your ranged unit, unless it is adjacent to a hostile unit.

Three casts per Master Genie stack.

Cannot be cast on itself (except as a mass spell on Magic Plains).

All spells except (naturaly) Frenzy and Cure last 5 rounds.

All spells except Slayer (which is cast on Base) are cast on Advanced level.

Condition	Works
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Anti-Magic Garrison	No
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Cursed Ground	No
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Orb of Inhibition	No
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Recanter's Cloack	Only spells levels 1-2 can be cast
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MEDUSA (QUEEN) AND (GREATER) BASILISK'S PETRIFICATION

Expiring ability. Level 3. 3 round duration. 20% appliance probability.

Resistance: Green/Gold Dragons, Red/Black Dragons, Azure Dragons, Magic Elementals

Immunity: (Infernal) Troglodytes

Petrified troops take half the damage and retaliate at full strength.

Can be cured and dispelled.

Condition	Works
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Anti-Magic Garrison	Yes
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Cursed Ground	No
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Orb of Inhibition	Yes
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Recanter's Cloack	No
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MIGHTY GORGON'S DEATH STARE

Instant resolving ability. Level 0. 100% appliance probability.

Immunity: Undead, Unliving

Every Mighty Gorgon has a 10% probability of Death Stare. 1-10 Gorgons can death stare a maximum of one unit, 11-20 two, 21-30 three etc.

Condition	Works
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Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

OGRE MAGE'S BLOODLUST

Cast spell. Level 1. 3 round duration. 100% appliance probability.

Resistance: Earth/Magma Elementals, Firebirds/Phoenix, Fire/Energy Elementals, Magic Elementals, Efreet/Efreet Sultans, Black Dragons, Gold Dragons

Three casts per Ogre Magi stack.

Advanced Bloodlust is cast: unit's melee attack increases by 6.

Cannot be cast on itself (except as a mass spell on Magic Plains).

Condition	Works
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Anti-Magic Garrison	No
Cursed Ground	No
Orb of Inhibition	No
Recanter's Cloack	Yes

PIT LORD'S DEMON SUMMONING

Cast spell. Level 2. 100% appliance probability.

Immunity: Undead, Unliving

Condition	Works
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Anti-Magic Garrison	No
Cursed Ground	No
Orb of Inhibition	No
Recanter's Cloack	Yes

POWER LICH'S DEATH CLOUD (only adjacent splash damage)

Instant resolving ability. Level 0. 100% appliance probability.

Immunity: Undead, Unliving

Does full damage to adjacent units as to the one directly hit, calculated specifically for each one.

Condition	Works
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Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

RUST DRAGON'S ACID BREATH

Non expiring ability. Level 0. 100% appliance probability.

Acid Breath ability of the Rust Dragon reduces the target stack's defense by 3 (down to 0), and does 25 * Number of Dragons additional damage. Both apply only to the first unit hit in case of a double strike. Defense reduction adds up with each strike and lasts for the entire combat.

It cannot be cured nor dispelled.

Condition	Works
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Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

SCORPICORE'S PARALYSIS

Expiring ability. Level 4. 3 round duration. 20% appliance probability.

Resistance: Gold Dragons, Black Dragons, Magic Elementals

Paralyzed troop cannot attack (will skip turn). If attacked it will retaliate at 25% and Paralysis will be canceled.

Can be cured and dispelled.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	No
Orb of Inhibition	Yes
Recanter's Cloack	No

THUNDERBIRD'S LIGHTNING STRIKE

Instant resolving ability. Level 0. 20% appliance probability.

Resistance: Green/Gold, Red/Black and Azure Dragons, Magic Elementals, Crystal Dragons (20% probability), Dwarves (20%), Battle Dwarves (40%).

When Thunderbirds attack there is a 20% probability Lightning will strike their target, delivering 10x the number of attacking Thunderbirds in additional damage.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	No
Orb of Inhibition	Yes
Recanter's Cloack	Yes

VAMPIRE LORD'S LIFE DRAIN

Instant resolving ability. 100% appliance probability.

Immunity: Undead, Unliving

Restores HP equal to damage done.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

(WAR) UNICORN'S BLIND

Expiring ability. Level 2. 3 round duration. 20% appliance probability.

Resistance: Giants/Titans, Golems, Elementals, Green/Gold Dragons, Red/Black Dragons, Azure Dragons, Efreet/Efreet Sultans, Firebirds/Phoenix, Crystal Dragons (20% probability), Dwarves (20%), Battle Dwarves (40%).

Immunity: Undead, Troglodytes/Infernal Troglodytes

Same as Basic Fire Blind spell.

Condition	Works
Anti-Magic Garrison	Yes
Cursed Ground	No
Orb of Inhibition	Yes
Recanter's Cloack	Yes

WYVERN MONARCH'S POISON

Non expiring ability. Level 0. Lasts the entire battle. 50% appliance probability.

Resistance: Green/Gold Dragons, Red/Black Dragons, Azure Dragons

Immunity: Undead, Unliving

The HP reduction is 10/20/30% of base HP rounded down. All creatures in the troop lose these HP including the top one. The top creature can be reduced to 1 HP minimum.

The poison and the HP reduction can only be removed by Cure; Dispel won't help. HP reduction will be removed even if Poison has expired. If it is removed, each creature in the troop including the top one is healed by the amount of base HP regained.

Once the poison has expired it can be applied again. However, the total HP reduction can't exceed 50%.

It is multiplicative with Ghost Dragon's Aging.

<u>Condition</u>	<u>Works</u>
Anti-Magic Garrison	Yes
Cursed Ground	Yes
Orb of Inhibition	Yes
Recanter's Cloack	Yes

ZOMBIE'S DISEASE

Expiring ability. Level 2. 3 round duration. 20% appliance probability.

Resistance: Green/Gold Dragons, Red/Black Dragons, Azure Dragons, Crystal Dragons (20% probability), Dwarves (20%), Battle Dwarves (40%).

Immunity: Undead, Unliving

Can be cured and dispelled.

<u>Condition</u>	<u>Works</u>
Anti-Magic Garrison	Yes
Cursed Ground	No
Orb of Inhibition	Yes
Recanter's Cloack	Yes

PECULIAR SPELLS AND ORB OF VULNERABILITY

CHAIN LIGHTNING

All creatures on both sides lose their resistance, no matter who wears the Orb.

FIRE SHIELD

It always does damage, for there is no unit resistant to it, only immune.

IMMUNITES PROVIDED BY ARTIFACTS

Pendant of Life: **Death Ripple**

Pendant of Death: **Destroy Undead**

Pendant of Free Will: **Hypnotize**

Pendant of Total Recall: **Forgetfulness**

Pendant of Dispassion: **Berserk**

Pendant of Second-Sight: **Blind, (War) Unicorn's Blind**

Pendant of Holiness: **Curse, Black (Dread) Knight's Curse**

Pendant of Negativity: **Lighting Bolt and Chain Lightning, Thunderbird's Lightning Strike**

Sphere of Permanence: **Dispel, Serpent (Dragon) Fly's Dispel**

Armageddon's Blade: **Armageddon**

Power of the Dragon Father: **all level 0-4 cast spells except Pit Lord's Demon Summoning. All level 0-4 expiring abilities. Also Dragon (Serpent) Fly's Dispel, Thunderbird's Lightning Strike and Wyvern Monarch's Poison.**

RESISTANCES PROVIDED BY ARTIFACTS:

Badge of Courage: Mind spells

SPELL/ABILITY GROUPINGS

MIND SPELLS

Blind, Berserk, Frenzy, Hypnotize, Forgetfulness, Mirth, Sorrow

FIRE SPELLS

Bloodlust, Curse, Magic Arrow, Blind, Fire Wall, Fireball, Land Mine, Misfortune, Armageddon, Berserk, Inferno, Protection from Fire, Fire Shield, Frenzy, Slayer, Sacrifice

CAST SPELLS

Level	Spell
1-5	Hero's spells
4	Archangel's Resurrection
1-3	Elemental's Protection from... spells
1-2	Enchanter's casting (mandatory casting, unlike other cast spells)
1-5	Master Genie's casting
1-4	Faerie Dragon's casting
1	Ogre Magi's Bloodlust
2	Pit Lord's Demon Summoning

EXPIRING ABILITIES

Level	Ability
1	Black (Dread) Knight and Mummy's Curse
2	Dragon (Serpent) Fly's Weakness
5	Ghost Dragon's Aging
3	Medusa (Queen) and (Greater) Basilisk's Petrification
4	Scorpicore's Paralysis
2	(War) Unicorn's Blind
2	Zombie's Disease

INSTANT RESOLVING AND NON EXPIRING ABILITIES

Level	Ability
5	Azure Dragon's Fear
0	Dragon (Serpent) Fly's Dispel
4	Efreet Sultan's Fire Shield
0	Mighty Gorgon's Death Stare
0	Power Lich's Death Cloud (only adjacent splash damage)
0	Rust Dragon's Acid Breath
0	Thunderbird's Lightning Strike
-	Vampire Lord's Life Drain
0	Wyvern Monarch's Poison

NO CREATURES HAVE RESISTANCE OR IMMUNITY TO THE FOLLOWING ABILITIES/SPELLS

BEHEMOTH'S DEFENSE REDUCTION

DENDROID'S BINDING (can be dispelled, or the Dendroids or the affected troop teleported. It cannot be cured, nor will Anti-magic work)

DREAD KNIGHT'S DEATH BLOW

MAGOG'S FIREBALL

RUST DRAGON'S ACID BREATH

SERPENT (DRAGON) FLY'S DISPEL (can be prevented with the Orb of Permanence or the Power of the Dragon Father).

DISPEL (can be prevented with the Orb of Permanence or the Power of the Dragon Father).

All mentioned, save Binding and (Serpent (Dragon) Fly's) Dispel, cannot be hindered.

SPELL HAMPERING ARTIFACTS, SPELLS AND TERRAIN (OBJECTS)

ORB OF INHIBITION AND ANTI-MAGIC GARRISON

Prevent all cast spells.

Expiring, instant resolving and non expiring abilities are not hindered.

Armor of the Damned or Angelic Alliance effects work normally.

RECANTER'S CLOAK

Prevents cast spells level 3-5, and expiring abilities level 3-5. Instant resolving and non expiring abilities are not hindered.

It prevents Angelic Alliance's Prayer, but not Armor of the Damned effect for both sides no matter the wearer.

It grants immunity from Tower's town Land mines to both players, no matter the wearer.

CURSED GROUND

Prevents all cast spells (exception: heroes may cast level 1 spells).

Prevents all expiring abilities except Black (Dread) Knight and Mummy's Curse.

Prevents one instant resolving ability: Thunderbird's Lightning Strike.

Unlike the Spirit of Oppression it also negates negative morale.

Prevents Angelic Alliance's Prayer, but Curse and Slow spells from Armor of the Damned effect will work.

ANTI-MAGIC

Prevents all cast spells of levels that it protects against considering Earth magic expertise.

Additionaly, it prevents Black (Dread) Knight and Mummy's Curse, Dragon (Serpent) Fly's Weakness, Thunderbird's Lightning Strike and (War) Unicorn's Blind. Other expiring, instant resolving and non expiring abilities are not hindered.

When cast it removes all detrimental cast spells of levels that it protects against considering Earth magic expertise except Disrupting Ray.

Additionaly, it will remove Black (Dread) Knight and Mummy's Curse, Dragon (Serpent) Fly's Weakness, Thunderbird's Lightning Strike and (War) Unicorn's Blind. Other expiring, instant resolving and non expiring abilities are not removed.

Beneficial spells will not be removed.

You can cancel Anti-Magic applied on your troop with any level of Dispel, but you must have Advanced Water Magic to dispel Anti-Magic cast on opponent's troop.

Anti-magic protection isn't negated by the Orb of Vulnerability.

MAGIC MIRROR

Reflects hero's target spells only.

Isn't negated by the Orb of Vulnerability.

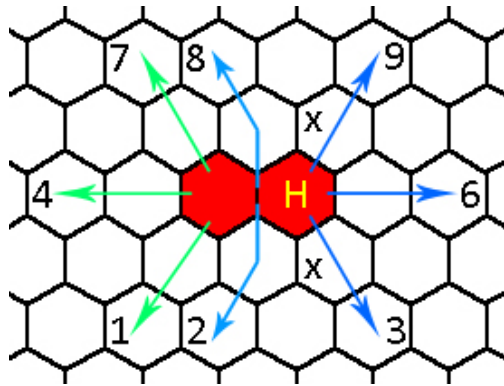
2-HEX ATTACK

Firebirds/Phoenixes and all Dragons save Crystal and Faerie have the property to attack two units in one attack if adjacent.

In the beginning of battle, when all creatures stand on their starting positions, the attacker cannot evoke opponent's Dragon Fire Breath attack on a friendly unit if attacking with a 2-hex unit, but can with 1-hex. Defender may use both 1-hex and 2-hex units for this purpose.

The configurations where the attacker is placed below the Dragon or the Dragon (Dragon meaning a 2-hex attack creature from now on) is facing the other side are of course the same, just flip the above images accordingly.

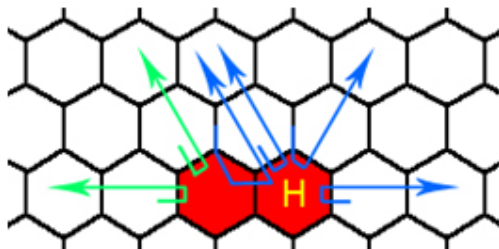
RULES OF HITTING TWO STACKS WITH A 2-HEX ATTACK



Green arrows indicate that the Dragon will turn around when it attacks/retaliates in the given direction. Otherwise the Dragon won't turn around. No other attack directions are possible without moving the Dragon.

There is one exception: If the Dragon attacks a 2-hex creature in the directions 2 or 8 (like the numpad) which also occupies one of the hexes marked with an X it will instead attack in the directions 3 or 9 respectively.

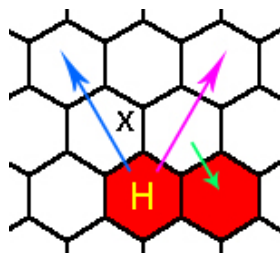
RULES OF EVOKING AN OPPONENT'S UNIT 2-HEX ATTACK AGAINST A FRIENDLY CREATURE



The next one shows how a Dragon will retaliate depending on the direction and hex from which it is attacked.

Again, green arrows indicate that the Dragon will turn around.

There is however one special case that cannot be treated like this. It is shown below:



The attacker attacks the Dragon along the green arrow. If it's a 2-hex unit it will also occupy the hex marked with an X. In that case the Dragon will retaliate along the blue arrow. If the attacker is a 1-hex unit it will retaliate along the purple arrow (since the direction of the blue arrow would be

absurd).

SPECIFIC BATTLE TACTICS

LUNA'S FIREWALL TACTICS

Luna is an extremely powerful hero in certain situations. Her Firewall does 20 * SP + 100 with Expert Fire expertise, and can easily take any Naga Bank or Griffin Conservatory very early - usually beginning of week 2 - with sufficient SP. No other hero in the game can do this as close as effectively, with Hack coming second.

GRIFFIN CONSERVATORY

When you place a 3-hex-Firewall against the left side of the battle field, leaving only one space for your fast 1-hex-troop (which should be your only troop unless the opponent can get morale, in that case you should always split to 3 stacks at least), Griffins will ALWAYS defend (this is valid for all situations). Next turn place a second Firewall next to the first one. Now the Griffins will fly into two Firewalls.

It is possible to take a full Griffin Conservatory w2d1 with no other spells. You will need to bring in a stack of creatures (like Efreeti, Magic Elementals or similar), fodder isn't enough. Also, you must have the initiative (beware of Royals). If you have SP 11 or more you may lose 1 level 6 unit, if you have Cure, likely none.

NAGA BANK

Nagas (and Queens) have 110 HP, so, in a full Bank, you need to be able to kill 330 HP with one Firewall, which equals 12 SP. If you have this and the initiative you do not need to fear morale at all, but, if you don't, you cannot simply enter with fodder, for 1 Naga will survive, and may get morale, so loses can be serious.

Other, Imp Caches and Dwarven Treasuries are much easier: you need 7 SP Firewall for full Cache, and 10 SP for a full Treasury.

Dragon Fly Hives are more difficult, mostly because of the initiative. If you can get that you need to kill 360 HP, for you are dealing with 1-hex units, which equals SP 13.

Never fight Pit Lords. As soon as any stack of them dies, another will resurrect it and the resultant Demon stack will be able to attack you before the Firewall damages it. If you attack Pit Fiends always kill the Pit Lord stack first for the same reason.

If an enemy stack is currently on a row beneath or above the Firewall and could manage to attack you from behind (based on its movement), it usually will by using most of its mobility to move forward, with his last hex of movement to be to close in on you just behind the Firewall. To avoid this sometimes you might need to count out their mobility to make sure that their last hex of movement is spent closing in on you on the Firewall.

BLIND TRICK

Winning a fight such as the one shown is done by casting Blind on any opposing stack and moving Hydras next to it. Your Hydras will never be attacked in that position for their retaliation would strike the blinded creature, which the AI will avoid at all costs. You need to wait out the Mighty Gorgons, strike and return next to the blinded stack. You do not even need that much mana, as shown.

The only problem may arise when you wait turn 1 if Gorgons get morale. This can be avoided by Mass Slow or Spirit of Oppression for instance.

Also, do not blind the same stack always: you need to attrition them so that you don't take on a 25 Gorgon stack last, that can easily kill 2 of your Hydras. If you have Expert Fire Blind this is less important (but is very unlikely to happen with Fortress armies).

Bless helps a lot if you are low on mana.

The same general strategy applies to Magic and Psychic Elementals.



1 ANGEL VS 250 MAGOGS

This is the variation of the above.

Hero's skills are 8/8/5/5.

You must be able to block 2 Magog stacks immediately.

Cast Shield immediately.

Cure when needed.

Always position the Angel between 2 stacks and always attack the lower one so that you retaliate to the upper one and attrition them steadily. It is an analogy to the above: the AI will not attack if it will damage itself, Dragons being an exception. Therefore Magogs will not fire for they would kill their own.



FULL CRYPT

Your troops will appear as (depending on the slot placement):

```

1 2
3 4 5
6 7

```

If you are not fighting on Dirt Vampires can reach your stacks 1 and 3. If you are fighting on Dirt Vampires can also reach 4 and 6. So NEVER place important stacks there. If you have a good shooter stack (Marksmen, Elves etc.) and a big melee stack (the latter is a must ofcourse) the ideal placement of your troops is mostly shooters on 5 and meelers on 2. You want the Vampires to attack 1 if they have the speed advantage so make sure it has more HP than 3. Your goal is to kill the Skeleton stack in one blow (or nearly) with your meelers and to move your shooters up right (if you don't have a speed advantage over Vampires).

Towns that can safely do it Day 1 are Rampart (Grand Elves, even Elves with the speed advantage or Haste/Slow), Castle (Marksmen, Archers likely mean some loses if you don't have plenty), Dungeon (Shakti, Bless, Slow or Haste are helpful), Conflux (Sprites are great, and it's a piece of cake with Bless). With Tower you can try only with a speed advantage, Stronghold's best bet is probably a large Hobgoblin stack, Fortress, Necropolis and Inferno are not recommended. Keep in mind that Crypts can't appear on Rough and Lava, so you probably won't have any dealings with this issue if playing Stronghold or Inferno.

CASTLE

Worst case scenario would probably be no Archer's Tower built, very low Archer numbers (4 – 10). In this case you don't want your Archers in anyway, but you do want a big fodder stack, and you could really use a Bless spell (Mage Guild is usually a Day 1 build because you are going for the Angels). You

could arrange your troops like this (fight is on grass so that Pikemen have speed 5. You will lose troops if you don't have the +1 speed bonus):

- 1 2 fodder (just make sure it has more HP than 3)
- 2 Big stack fodder
- 3 1 Pikeman (to act before Wights do)
- 4 All Pikemen
- 5 1 fodder
- 6 1 fodder
- 7 1 fodder

Vampires will kill 1, now 3 attacks them to take up the retaliation (on grass Pikemen have speed 5 like Wights and 3 will go first because of the alternating rule). Wights kill 6, 4 (blessed if possible) attack Vampires. Skeletons and 2 should do their own fight, 5 and 7 move towards Wights. Walking Undead probably move up towards 2. End of first round. Vampires will be dead round 2, Wights will last 2 more rounds. 2 should have killed the Skeletons (or at least most of them). So from round 5 you have about 45 Pikemen fighting against 20 Walking Undead.

If you have a reasonable Archer stack (12+) your goal would be to move with them to the Skeletons' positions (look at the general rules).

If you have a single Angel (e.g. it is your scout doing fights) you should attack Wights turn 1, then Skeletons turn 2. Do not attack the Vampires turn 1.

RAMPART

If you take Ivor and get a good number of Elves it is an easy fight on grass (even on neutral) Day 1, you don't need a big fodder stack or the Dwarves. Just follow the general tips. If you get just 7-8 Elves, <40 Centaurs and a fodder stack you will probably sustain losses.

NECROPOLIS

Very tough if you don't go with Galthran. Get a Mage Guild first too. If you get Haste it becomes easy. Arrange as such:

- 1 3-4 non Necro level 1
- 2 Zombies
- 3 2 Skeletons
- 4 1 Skeleton
- 5 All Skeletons
- 6 1 Skeleton
- 7 1 Skeleton

Vampires kill 1. 3 moves towards Wights, Wights kill it. 4 soaks Vampires' retaliation. 5 hits Vampires. 6 moves towards Wights to take their hit on turn 2. 7 sticks around the middle (used when needed). 2 hits Vampires. End of round 1. Vampires will probably hit 2, but since they are a no retaliation unit it is hard to predict anything. Hasting your Skeletons round 1 works best, if you don't have Haste Slow the Vampires down, if you don't have Slow, cast Shield on Skeletons, or cast a Magic Arrow on the Vampires. 5 finishes off Vampires, 6 gets killed by Wights, 7 sticks around, trying to avoid getting killed. 2 is fiercely fighting the Skeleton stack. You can Shield them in the beginning of the round to help keep them alive. End of round 2. At this point you have Wights in the bottom right corner, nearly dead Skeleton stack, and an enemy 20 Zombie stack to deal with. Use the big Skeleton stack, Zombie stack, 1 Skeleton stack to win with minimal Skeleton losses.

FORTRESS

Drakon and Bron are your best bet. Lizards aren't of that much use.

- 1 fodder (make sure it has more HP than 3)
- 2 big fodder stack

3 1 Gnoll
4 All Gnolls
5 1 fodder
6 1 Serpent Fly
7 1 fodder

6 attacks Vampires. Vampires attack 1. 4 attacks Vampires (should deal up to 150 damage). 3 moves to the corner next to the Wights. 2 attacks Vampires. End of round 1. Since your Serpent Fly is now dead your Gnolls get a strike on the Vampires, leaving 2 at most.

DUNGEON

If playing Shakti and having a large stack of Troglodytes, Infernal Troglodytes will still be slower (on randoms) than the Vampires in Crypts for you start on Dirt. Therefore, place the Troglodytes on position 2, so that you are safe from Wights as well. If you have a +1 speed artifact then you may place them on 1 and kill Vamps turn 1, but you will likely need Bless.

MEDUSA STORES

CASTLE

Your main disadvantage here is that Pikemen are only of speed 4, you can't use them as single speed blockers. Use any other unit that has speed 6 or more, Gargoyles, Harpies, Griffins etc.

Never try to block the Medusas and use your Marksmen, they will move towards them and you are dead.

This means there are two options with Castle to take the Stores, and that is if you built Cavaliers or Angels week 1.

RAMPART

Unicorns and Centaurs are perfect, just be careful with Elves for the case Medusas get morale. You will need to go for the stack that is closest to your Elves with your tank stacks, and then you hope that none of the blocked Medusas shoot at the Elves.

TOWER

Nagas can kill everything and your Master Gremlins should kill 1 whole stack too. Gargoyles are perfect blockers. Try to aim to have Haste ready for the Nagas (not required for Naga Queens), or you may be too slow in the end.

If you split the Naga Queens in 5 you can use your Master Gremlins to take out any Medusa stack which gets morale or stones the Naga Queen.

You can also split the Queens in 2 and 3 (make sure 3 go down to confront Medusa Queens). You want it look like this (make sure to place Gargoyles exactly as such, you want Medusas to enter the Queens' range when killing 2 Gargoyles).



FORTRESS

Stay away from the Stores, Wyverns are weak, Gnolls are slow, and more often that not you will not have many other options.

If the Stores are at swamp and you have Gorgons than you can go for them. Upgrading your Gnolls might also be good - speed 6 and they hit hard, you can hope to take 1 stack of Medusas out fast.

STRONGHOLD

Also not recommended, Behemoths can get into speed troubles (Cure would be very helpful but you have only 6% probability to get it in Stronghold's Mage Guild) and you don't want to loose your Rocs. Stronghold hardly needs the money bad, Sulfur you don't need anyway.

If you want to try it, you need a good Goblin force. Usually you don't want to split your Behemoths – if some of them get stoned the lonely Behemoth will die.

INFERNO

Good town to do it if you have Pit Fiends, coupled with Efreets they hit hard and fast. A large stack of Imps helps of course, but you really need at least 4 Efreets and 7 Pit Fiends to try it, or else 40 Medusas will RIP you. Bring a stack of some Hell Hounds for a blocker that lasts a bit longer than a single Imp.

NECROPOLIS

Vampire Lords make it a breeze. Without them you can do it with Haste and a bunch of Skeletons, but you don't have any fast hometown blockers so you will need luck with your Tavern heroes. It is not recommended to take the Liches with you.

DUNGEON

Troglodytes, Harpy blockers and a strong Minotaur force will easily beat 40 Medusas. If you went for Manticores you can get into troubles because they don't deal enough damage. Hasted Troglodytes are extremely powerful.

NAGA BANK

In general, venturing here without Mass Slow is a bad idea. If possible, try to eliminate the morale threat as well.

DWARVEN TREASURY

IMP CACHE

DRAGON UTOPIA

There are 4 kinds of Dragon Utopias, depending on the number of Dragons:

Blacks/Golds/Reds/Greens

1/2/5/8

2/3/6/8

3/4/6/8

5/6/7/8

So, if you see the message:

'Dragon Utopia guarded by pack of creatures: ...'

It's either the 1st or the 2nd; it's not possible to pin point which is it without entering.

If it's a Utopia guarded by lots of creatures, but only a few Blacks it is a 3rd one.

If having several of all it's a full Utopia.

GENERAL

It is possible to take a full Utopia with shooters (Grand Elves), or appropriate level 7 flyer (Archangels, Archdevils) very early if accompanied by Force Field spell (costs 12) and sufficient mana.

It is very helpful to have Earth magic to reduce the cost by 3, and Magi in army would be great to reduce it by further 2. Archery and Offense skills, Haste, Cure and Shield (e.g. for Archangels), Ammo Cart (e.g. for Grand Elves, a must), Bless or Bloodlust (e.g. for Archdevils) are all very welcome.

Depending on the Utopia and your troops, you may need anywhere from 40 to 200 mana.

If you don't have Advanced Earth you will have 2-hex Force Field, not enough to protect a 2-hex unit.

CASTLE

You can take even a full Utopia with 7 Archangels, but you will need Shield and Cure spells. You should start with Shield or Stone Skin and always go for Blacks or Golds turn 1 so that Greens and Reds cannot reach you. Then position yourself in the corner and cure when needed. Your priorities afterwards are Greens and Reds, for they are easier to kill and have higher damage output.

You can also separate the Archangels to 3 + 4 (never less than 3) so that you can resurrect twice. This will work even without Shield, but you will need a good Cure and a good hero (Tazar and Hack would be best). Ideally, you should be able to occupy the greens and reds for a few turns with fodder (so you likely need Mass Haste).

INFERNO

Archdevils and Force Field can take any Utopia with sufficient mana easily. The ideal hero is Crag Hack.

DUNGEON AND RAMPART

If you possess Dragons and do not have the speed advantage it is prudent to position your Dragons so that they can only attack your fodder unit in the case the AI decides to strike them. Most of the time these are positions 1, 3 or 6. E.g. if you position them at 3 you should have fodder on 1 and 6.

Your goal should always be to avoid the Greens and Reds round 1. This is easy if you have a unit of speed 11 that will survive the potential attack from Golds and Blacks, and Mass Haste. Then you can distract Greens and Reds with your less important units.

NECROPOLIS

Vampire Lords. Animate Dead, Shield or Counterstrike is all that is needed, considering the size of the Utopia, and the number of Vampires. Armorer specialist is perfect, or Offense specialist if you have Counterstrike.

GRIFFIN CONSERVATORY

There are four kinds of Griffin Conservatories:

1. guarded by 50 Griffins (provides 1 Angel)
2. guarded by 100 Griffins (provides 2 Angels)
3. guarded by 150 Griffins (provides 3 Angel)
4. guarded by 200 Griffins (provides 4 Angels)

If you see that it's a horde of creatures that is easy to win with a few level 6 and some level 1 units. If you see a throng of creatures you shouldn't attack without 3 level 7 unless you see lots of Royal Griffins and a horde of Griffins: this means it is of 2nd type, and this can be done rather easily as well. If there are no Royals you cannot estimate how many Griffins are there if you do not enter the Conservatory.

CASTLE

It is possible to take a full Conservatory with 3 Archangels and 6 Pikemen. You need Slow, Shield and Cure and a decent SP and K. There is a possibility to lose 1 Archangel in case of a very unlucky morale of the Griffins.

Marksmen aren't really your best bet for they have equal speed as the Griffins, and are easy target for Royals. If you have the speed advantage (Valeska, artifacts), and, more importantly, fodder faster than the Griffins you can do the Royal-free 1st type immediately, but this is unlikely.

In general, you should wait for Cavaliers or Angels.

DUNGEON

Shakti with upgraded Trogs can easily take out the 1st type, and, if you have Bless, the second type as well. If you fight on neutral terrain no one has the speed advantage.

STRONGHOLD

Crag Hack can take a full Conservatory w2d1 with 3 Ancient Behemoths, Wolf Raiders, Thunderbirds etc. even without (mass) spells if he has sufficient stats (10 or close in A/D).

DRAGON FLY HIVE

Main trait of Hives is that you usually do not have initiative. Therefore, if you have Dragons of any sort, it is important to position your troops so that the Flys cannot cause a Firebreath attack against your stack. The pictures show how 1-hex and 2-hex units are positioned in any similar structure.



Notice:

- Dragons cannot be easily deployed without being dangerous for your troops. From position 1 they will endanger 3 and 4, from 2 they will endanger 5, and 4 if its 2-hex etc. So, a good choice could be 4 stacks, 1-hex on 4, and Dragons on 2 - this is the maximum number of stacks you can deploy and avoid friendly Firebreath. If you place the Dragons on 7 they will always be able to strike 5, but 4 only if it's 2-hex, so this can be used too by placing fodder on 5.
- If you deploy fodders on 3, 4, 5 your Firebreath may only hit your fodder.
- Notice what stacks enemy troops can reach based on their speed: not important for Hives, but yes for Crypts, Banks, Treasuries, Caches etc. E.g. Vampires can reach 1, 3, 5 if on neutral, but on dirt they can also reach 4.

GAME BUGS AND CHEATS

You can enable cheat menu by running the game with X:\...\Heroes.exe /NWCGRAIL command line. Now, in game press F4 to go to window mode, and you will see the cheat menu.

While it's your opponent's turn you can estimate his resources by attempting to buy units, or looking which buildings you (actually he) can build. Also, you can click in the bottom right corner box where you see his flag. You'll see how many towns he has and of what hall type (Village Hall, Town Hall, City Hall, Capitol).

Building a Lighthouse in Castle town increases naval movement of all players' heroes.

Advanced Forgetfulness is a mass spell.

If you attack non upgraded monsters that comprise an upgraded stack, after the retreat, or after you lose, the total amount of creatures will decrease by the number of the upgraded stack. There is no limit to how many times this can be achieved. If abused, this is considered cheating.

The Garden of Life says it increases the weekly growth of Sprite/Pixies by 10 per week but it actually does only by 6.

During your opponent's turn you can right-click on Magic Gardens, Wheels, Magic Shrines (where you can learn spells of level 1, 2, 3) to discover if you opponent was there. If he visited e.g. Magic Shrine level 1 you will be able to read the name of the spell.

If you find a Seer's Hut/Quest Guard etc., which asks you for some creatures (e.g. 5 Hydras) you can revisit the place with exactly the required creatures. By completing the quest your hero becomes a 'ghost hero' – carries no creatures. If you move him into the Garrison and try to get him back out you will see a message: 'This hero has no creatures. A hero must have creatures before he can brave the dangers of the countryside.'

The other, far easier way to accomplish the same is by having two heroes rendezvous: you must get them in such a situation where the future ghost hero has just 1 unit in his army, while the other hero may have any number of units, but they must be in a single stack. Then split the 1 unit into any unoccupied slot of the other hero - it will transfer there.

Using ghost heroes could (will) be considered cheating (although it seems the game designers predicted it).

Ghost heroes have 1900 movement points (speed 9 unit) but do suffer terrain penalty. If playing random maps where towns are placed on native terrain they mostly become useless for towns whose native terrain has penalty associated (Tower and Fortress the most), and incredibly useful for towns whose native terrain has no movement penalty (Castle, Rampart, etc.).

Ghost hero will disappear as soon as he engages in combat.

If you play almost any popular random template and see dirt road instead of a cobblestone road it usually means that the map is bugged, and restart is necessary.

When selling artifacts position the artifact for which you can gain the highest possible money amount on the far right side, and select gold (or any other resource). Now, scroll right and you will see that the price will remain unchanged, while the artifact being sold is now another. This is a game bug, is considered cheating.

Armorer skill and Air Shield increase (approx. double) the damage you receive from town's Turrets, instead of reducing.

By using Fly spell or Angel Wings it is possible to enter any blocked town by pressing SPACE when the hero is moving over the town. In case it is guarded by heroless troops your hero will fight his copy (artifacts and army are cloned as well, you will get the units from the town added to your army and

the defenders will get your strongest units. In case that you do not have enough slots for all defending stacks only the strongest will join you). No matter if you win or lose the battle you will lose your hero, but he will immediately be available for purchase at the Tavern, and will have higher experience based on combat results (HP destroyed). Also, the city will become yours.

ADMIRAL'S HAT MOVEMENT INCREASE

L_0 - hero's total land movement points. Depends on the speed of the slowest unit, Logistics (and specialty), land movement artifacts, and Stables bonus. Adjusts automatically during turn if mentioned factors change.

N_0 - hero's total naval movement points. Calculated as $3000 + 750 * \text{Navigation level}$, plus specialty and Lighthouses, if any. Adjusts automatically during turn if mentioned factors change.

L - current land movement points

N - current naval movement points

m - movement cost, 100 for straight and 141 for diagonal movement

When hero embarks on a boat his land movement points are translated into naval movement points as such:

$$N = (L - m) * N_0 / L_0$$

When hero disembarks a boat his naval movement points are translated into land movement points as such:

$$L = (N - m) * L_0 / N_0$$

Since N, L and m cannot be influenced, one should notice that the only important factors are L_0 and N_0 .

When hero embarks on a boat he will want his N_0 to be as high as possible, and L_0 as low as possible. Therefore, he should equip the slowest unit and unequip movement artifacts.

The opposite is when hero disembarks a boat: he will want his L_0 to be as high as possible, and N_0 as low as possible.

Example: a hero started the turn with Archangel only (so $L_0 = 3500$). He has Expert Logistics, Expert Navigation, Boots of Speed, Equistrian Gloves, Admiral's Hat, Archangel and a Zombie in army, 2000 land movement points left. He embarks a boat in two ways (straight embarking both):

1) land movement artifacts equipped, only Archangel in army. His naval movement points will be:

$$N = (2000 - 100) * 5250 / 3500 = 2850$$

2) artifacts unequipped, only Zombie in army:

$$N = (2000 - 100) * 5250 / 1950 = 5115$$

As you can see, it is a huge difference. But it is not over - now the hero from case 2) disembarks the boat, but prior equips his arts, and returns the Archangel. His land movement points become:

$$L = (5115 - 100) * 3500 / 5250 = 3343$$

By embarking and disembarking a boat under right conditions a hero has gained $3343 - 2000 = 1343$ extra movement points. This can be even more radical for Navigation and Logistics specialists. Notice that there is no limit to doing this, except turn duration possibly.

Peculiarity: land map objects that increase movement will increase L, but they will also, undesirably, increase L_0 : this can be prevented by opening hero screen after visit, for then the recalculation is made, and L_0 is not affected, therefore allowing higher naval movement when embarking the boat.

GRAIL IN ONE DAY

When the game checks whether the hero is capable of digging the Grail, it actually checks to see that he has full movement points compared to the slowest unit he is currently carrying. By using a simple calculation it is possible to move and dig for the Grail in the same day.

Example: a hero starts with 1 Archangel, no Logistics, so has $L_0 = 2000$ movement points. If you give that hero a Zombie, you will set $L_0 = 1500$. This means that the hero may move 5 straight tiles on non penalty terrain, and then dig for the Grail. Mind, it is not possible to dig if you have $1500 < x < 2000$ movement points: you must have the exact number as you would have on the beginning of the next turn based on your slowest unit.

CHEATS (SHADOW OF DEATH VERSION)

nwctheconstruct	100,000 Gold and 100 of Every Resource
nwthereisnospoon	999 Man and All Spells
nwczion	All Buildings
nwclotsofguns	All War Machines
nwcphisherprice	Alternate Color Scheme
nwcagents	Fill Each Slot with 10 Black Knights
nwctrinity	Fill Your Army with Archangels
nwcfollowthewhiterabbit	Full Luck on Your Hero
nwcmorpheus	Full Morale on Hero
nwcneo	Gain +1 Level for Hero
nwcignoranceisbliss	Hide Full Map
nwcbbluepill	Instant Loss
nwcredpill	Instant Win
nwcwhatisthematrix	Reveal Full Map
nwcoracle	Show Full Grail Map
nwcnebuchadnezzar	Unlimited Movement for Hero