

NerdChess

A board game

- This is a chess-like board game
- There are two players, each with a color and a number of pieces of different kinds
 - We'll refer to white vs. black in the following
- The board consists of 6x6 cells
- The goal is to occupy three out of four special cells in the board with one's own pieces or to kill all the opponent's pieces

Game outlook

Giant	Knight			Squire	Archer
Dragon	Squire			Knight	Mage
Mage	Knight			Squire	Dragon
Archer	Squire			Knight	Giant

- The special cells are here highlighted in orange
- The shown board displays the initial configuration with each piece in its starting position

Game rules

- White moves first
- Players alternate turns in a round robin fashion
- A turn consists in one of the following actions:
 - Moving a chosen piece of one's own side
 - Attacking an opponent's piece
 - Casting a spell
- Each piece type has different characteristics:
 - The way it can move on the board
 - The way it can attack other pieces
 - Its vitality
- The effect of an attack is to reduce an opponent's piece vitality
- If vitality is 0, the piece is killed and removed from the board
- The goal is to occupy three special cells or to kill all of the opponent's pieces

Piece types

	Initial	Move			Attack		
	Vitality	Range	Directions	Type	Range	Strength	Directions
Giant	5	2	horiz+vert	walk	1	4	horiz/vert
Dragon	6	3	horiz+vert	flight	2	3	horiz/vert
Mage	7	1	any	walk	n.a.	2	n.a.
Archer	5	2	any	walk	3	2	horiz/vert
Squire	3	1	horiz+vert	walk	n.a.	1	n.a.
Knight	4	1	any	walk	1	2	diagonal

Moves

- A piece can either “walk” or “fly” in the specified directions (horizontally, vertically or diagonally) of up to as many cells as allowed by the move range
- Flying means that the piece can land to any cell in its range regardless of whether the cells it crosses are occupied or not (i.e., “flying over” the cells)
- Walking means that the piece can only move through empty cells
- In both cases, the destination cell can be either empty or occupied by an opponent’s piece

Example of walk

		Knight		Squire	Archer
Dragon	Squire	<u>Giant</u>	Knight		Mage
Mage	Knight			Squire	Dragon
Archer	Squire			Knight	Giant

- A Giant can walk
 - Range = 2 cells
 - Directions = horizontal or vertical
- In the shown board, the white Giant can only move to any of the red cells
 - Here, the Giant can't walk past Knights or Squires

Example of flight

Giant	Knight			Squire	Archer
<u>Dragon</u>	Squire	Knight			Mage
Mage	Knight			Squire	Dragon
Archer	Squire			Knight	Giant

- A Dragon can fly
 - Range = 3
 - Directions = horizontal or vertical
- In the shown board, the white Dragon can only move to any of the red cells
 - The Dragon flies over the other pieces

Example of walk with diagonal moves allowed

Giant	Knight			Squire	Archer
Dragon	Squire	Knight			Mage
Mage		Knight	Squire		Dragon
	Squire	<u>Archer</u>	Knight		
				Giant	

- An Archer can walk
 - Range = 2
 - Directions = horizontal or vertical or diagonal
- In the shown board, the white Archer can only move to any of the red cells
 - The Archer can't walk past other pieces but can move diagonally

Attacks

- A piece A can attack an opponent's piece B if
 - B is within A's attack range along one of the allowed attack directions
 - Unlike moves, the same direction must be kept for the entire range (e.g., an Archer can attack 3 cells horizontally, but not 2 horizontally + 1 vertically)
 - There is no other piece between A and B along the attack direction
- When B is attacked by A
 - B's vitality is diminished by an amount equal to A's strength; vitality can go down to a minimum of 0
 - If B's vitality goes to 0, B is killed and removed from the board

Example of attack - Giant

		Knight	Squire		Archer
Dragon	Squire	<u>Giant</u>	Knight		Mage
Mage	Knight	Squire			Dragon
Archer	Squire			Knight	Giant

- A Giant can attack with
 - Range = 1
 - Direction = horizontal or vertical
- The white Giant in the shown board can only attack one of the pieces in the red cells
- If the Giant attacks the black Squire and the Squire has vitality 3, the Squire is killed (vitality goes to 0, since Giant's strength is 4)

Example of attack - Archer

	Knight	Giant	Squire		Archer
	Squire		Knight		Mage
Mage	Knight	<u>Archer</u>		Squire	Dragon
	Squire	Knight			
	Dragon	Giant			

- An Archer can attack with
 - Range = 3
 - Direction = horizontal or vertical
- The white Archer in the shown board can only attack one of the pieces in the red cells
- Assume the Archer attacks the black Squire and the black Squire has initial vitality (3):
 - that Squire's vitality goes from 3 to 1, since Archer's strength is 2

Example of attack - Knight

	Knight	Giant	Squire	Squire	Archer
		Knight	<u>Knight</u>		Mage
Mage		Archer		Squire	Dragon
	Squire				Giant
	Dragon	Giant			

- A Knight can attack with
 - Range = 1
 - Direction = diagonal
- The black Knight in the shown board can only attack one of the pieces in the red cells

Combat

- If a move makes a piece arrive at a cell occupied by an opponent's piece, they start a combat
 - At the end of the combat, one of the pieces (or both) will be killed, depending on their vitality and attack strength
- The combat happens in the moving player's turn and works as follows:
 - Both pieces diminish their vitality by an amount equal to their opponent's strength
 - This is repeated until one or both pieces are killed
- Special cases (interaction with spells):
 - If one of the two pieces is frozen (see spells, later), the frozen piece is killed and the other piece preserves its vitality unchanged
 - If both pieces are frozen (might happen by teleport, see spells), both are killed
- Example: If a Giant with vitality 5 (strength 4) combats against a Mage with vitality 7 (strength 2), at the end of the combat the Mage is killed and the Giant remains alive with vitality 1

Mages and Squires

- Mages and Squires cannot perform attacks
 - Their attack range is 0
 - They can engage in combats, though, so their strength is greater than 0
- Mages can cast spells
 - Any spell can only be cast once by a mage
 - No spell can involve a special cell or a cell where a mage lies
 - If the player's mage is killed or frozen, the player cannot cast any spell

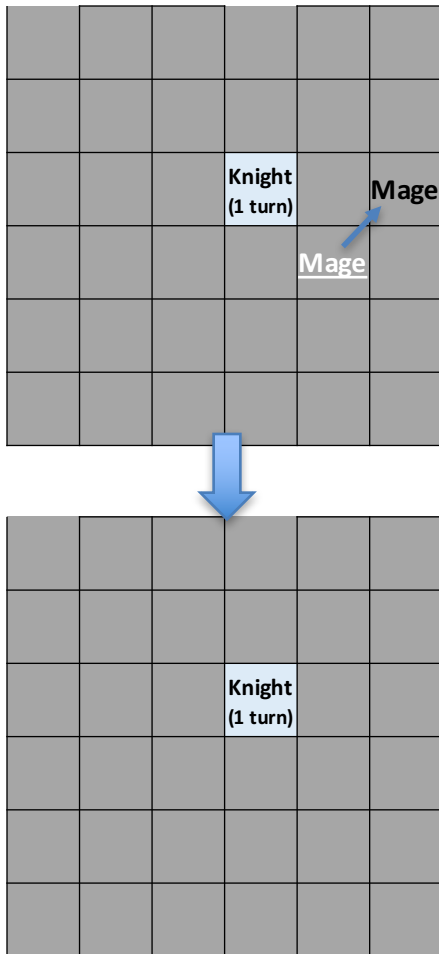
Spells: effects and requirements

- **Heal:** restore the initial vitality of a player's piece
 - The piece cannot be in a special cell! The piece cannot be the mage!
 - The piece cannot be killed
- **Teleport:** move a selected piece to any cell
 - The source cell must be occupied by a player's piece
 - The destination cell must be either free or occupied by an opponent's piece (in the latter case there will be a combat)
 - Neither cell can be special. Neither cell can be occupied by a mage.
- **Freeze:** a selected opponent's piece is frozen (and thus cannot move and cannot attack) for the opponent's next 3 turns. Right at the end of the opponent's 3rd turn, it's unfrozen
 - The piece must not be in a special cell. The piece must not be a mage.
- **Revive:** bring back a player's killed piece with its initial vitality and unfrozen
 - Its new position will be the initial position
 - A squire or knight may also be brought back to the position of its twin
 - The revived piece's new position must be either free or occupied by an opponent's piece
 - in the latter case there will be a combat

End of game

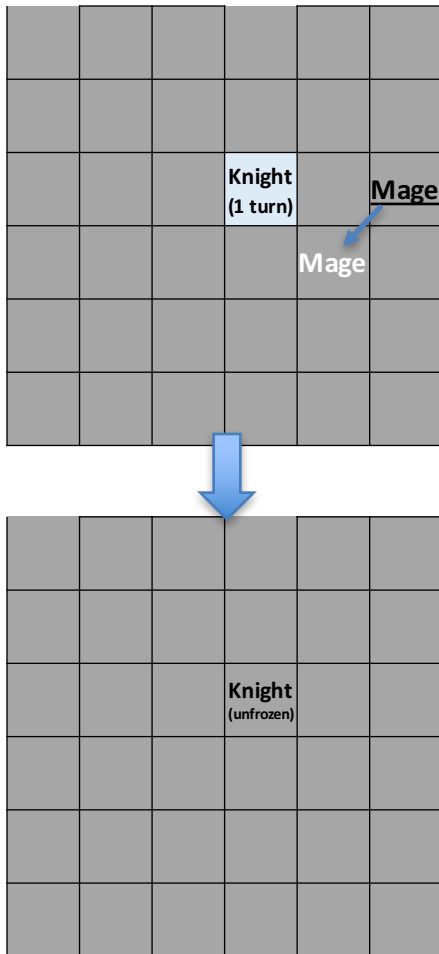
- A player P wins when:
 - P's pieces occupy three special cells, or
 - P's opponent's pieces are all either killed or frozen and P has at least one non-killed and non-frozen piece
- If, when it's P's turn, P cannot move (all of P's pieces are either killed or frozen) and P's opponent hasn't won, then the game ends in a draw

Example of end of game



- Black knight is frozen
 - 1 more turn to go before unfreezing
- It's white's turn
- White mage moves over black mage and they are both killed
- It's now black's turn, but black knight is still frozen for one turn and can't move
- It's a DRAW

Another example of end of game



- Black knight is frozen
 - 1 more turn to go before unfreezing
- It's black's turn
- Black mage moves over white mage and they are both killed
 - Black knight gets unfrozen
- No white piece is around
- BLACK wins