Totally Radical

In Totally Radical, mix turn-based card playing and fast-paced reactions to rack up points and build your simplifying skills.

Objective
The first player to earn enough points is declared the victor.

Components
90 Factor cards
25 Radicand cards
4 Radical Mats

Setup
Place the four mats so that one is facing in each direction, forming the edges of a square. Shuffle the Factor deck and deal 5 cards to each player. Place the remaining Factor cards in the empty middle area, with one card in the discard pile.

Designate an area to be each player’s Score Pile. Every card placed in the score pile is 1 point.

Shuffle the Radicand deck and place one Radicand card in each quadrant (under the radical sign). Place the remaining Radicand in the middle.

The player whose age is closest to a perfect square goes first. Play continues clockwise around the table.

Game Play
Each turn, a player will draw a card from the top of the factor deck or the discard pile. They also have the choice of 1 of the following 5 actions:

Factor – Play two numbers from your hand that are factors of one of the radicands. You may use more than one card for a multi-digit number – if you do, place them overlapping to indicate they are part of the same number. Take the radicand card and place it in your Score Pile.

Note: If the number you are factoring is made up of more than one card, put only one in your score pile and the rest into your hand.
**Root** – If a perfect square is inside a radical symbol, you may play the square root outside the radical and place the card into your Score Pile.

**Multiply** – If two separate factors are together inside or outside the radical, you can play the product of the two. Take one of the factors and place in your hand, and put the other into your Score Pile.
Action Card – You may play an action card (Simplify!, Search! or Swap!) and follow the directions on the card. See Action Cards for details.

**Draw** – Draw an additional card from the Factor deck into your hand. You may instead draw the top card of the discard pile.

At the end of each turn, each player will discard a card. If you have more than 7 cards in your hand, discard down to 7.

**Simplest Form**

If a radical in one of the quadrants cannot be factored and simplified any more, a player may slap it and shout “Simple!” If they were correct in doing so, they may place all cards from that radical into their Score Pile. *This is the only time more than one card may go into the Score Pile.*

However, if a player slaps in error, they will be penalized and must lose a card from their Score Pile, placing it in the discard if it is a Factor card or out of play if it is a Radicand card. If the player has no cards in their Score Pile, they must discard a card from their hand.

*Note: When a player is playing a card, they play their card first, then remove the other card to their score pile. Only at this point is the radical in Simplest Form and can be slapped, so as to not give an unfair advantage to the person playing the card.*

**Winning And Losing The Game**

When a player reaches the required points, the round must be completed. At that point, whoever has the highest score is the winner. In the event of a tie, the first person to write down the simplest form of all four radicals on the board is declared the winner.

- 2-player game: 20 points
- 3-player game: 15 points
- 4-player game: 12 points

**Action Cards**

**Simplify!**

If two of the same factor are beneath the same radical, you can play a Simplify! card. Take one of the factors into your Score Pile and place the other outside the radical as a coefficient. Then put the Simplify! card in the discard pile.

Then play Simplify!

**Search!**

Look through the Factor Deck (but not the discard pile) for any two factors, reveal them, and take them into your hand. This does not include Action Cards. Place Search! into the discard pile after use.
**Swap!**

Exchange one card from your hand with a card from any Score Pile. This may include a Radicand card. You may also place the Swap! card itself into the Score Pile. If you do not, place the Swap! card into the discard pile.

**An Example Of Play**

On the board the radicand cards of 20, 72, 97, and 169 are in play.

**Round 1**

**Sam:** Sam plays a 4 and a 5 from his hand and places them where the 20 is, putting the 20 into his Score Pile.

**Karen:** Karen places a 2 outside the radical Sam played out, taking the 4 into her Score pile.

**Michael:** Michael sees nothing he can play, so he draws a card.

At this point, Sam realizes that 97 is a prime number, and cannot be simplified. He slaps it and shouts “Simple!” After checking that he is correct, he puts the 97 into his Score Pile and draw a new Radicand card for that quadrant of the board.

**Angie:** Angie realizes she needs a 4 to break down 72, so she plays her Swap! card, exchanging a 5 she had with the 4 in Karen’s score pile.

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**Credits**

The following people made this game possible.

**Game Concept:** James Cleveland

**Play Testers:** Sarah Barnett
Rob Suzzi Valli
Jenn McCarthy
Cindy Bradford
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**Legal**

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