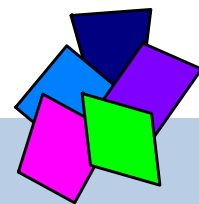


# Game of Quads



## Strand:

Number & Quantity

Algebra

Functions

Geometry

Statistics & Probability

X

What properties does each type of quadrilateral have? Deepen your familiarity with quadrilaterals in this game for 2 to 4 players.

## Materials Needed:

- Quadrilateral cards (1 copy of each)
- Property cards (10 copies of each)
- Scrap paper for recording points.

### Set-Up:

- Cut out the *Game of Quads* cards. Use the word cards to play a round. Shuffle the cards.
- The youngest player deals each player 6 property cards and places the rest face down in the center of the playing surface.

**Object of the Activity:** Match at least three property cards with its quadrilateral.

### Playing the Game:

1. If you have 3 or more of the same card, replace one of the cards.
2. All players play simultaneously. The dealer turns over a quadrilateral category card.
3. From your hand, pull as many property cards as possible that fit the quadrilateral card. Lay them face down in front of you. For example, if the quadrilateral is rhombus, opposite sides are parallel so that property fits the category. Though a square is a rhombus, not every rhombus has four 90 degree angles so that property does not fit the rhombus category.
4. When each player has found at least 3 cards, all players flip over the cards they played on the table. Verify that the cards others played fit the category.
5.
  - a. Earn 1 point for each correct property card you played.
  - b. If a player disagrees with a property card and can explain why it does not fit the category, the player earns 1 point for each incorrectly chosen property card.
  - c. Discard the property cards played in this round.
6. From the deck, replace property cards so you have 6 cards in your hand.
7. Repeat steps 1 through 6 until each quadrilateral category card has been used.

**To Win:** The player with the most points after 8 rounds wins.

### Think About It:

1. Which quadrilaterals share the same properties?
2. Which quadrilaterals are not parallelograms? How do you know?
3. Which quadrilateral has the most properties? List the properties of this quadrilateral category.



## Where:

Outside

Inside

On-line

On-site

X

### Variations:

**Game of Quad Shapes:** Play as above using shape cards in place of the quadrilateral name cards.

**Game of Quads Hierarchy:** As a group, students lay out all the quadrilateral name cards and determine which quadrilaterals share the same properties to create a hierarchical structure of quadrilaterals.

### Helpful Hints:

- Introduce the game by turning over one quadrilateral category card and 6 property cards. In turn, let players choose one card from those shown to match the quadrilateral category. Ask players to explain their choices. Ask other players if they agree and if not why not.
- If a player is struggling to match property cards with quadrilateral categories or shapes, ask questions such as, "What is a parallelogram?"
- If the player can list properties of some quadrilaterals but is having difficulty with other, ask, "Does this quadrilateral share any of the same properties with other quadrilaterals?"