

# 53.

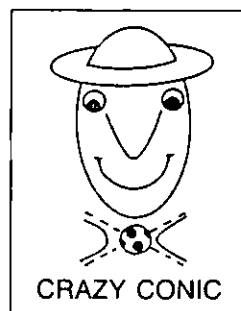
## Crazy Conic

Topic: Origin-centred conics—algebra 2 or analytic geometry

Level: Grades 11–12

Number of  
Players: 3–4

Materials: Set of “Crazy Conic” playing cards



- Procedure:
1. The dealer shuffles the cards and deals them all out. Players match the graph of a conic with the corresponding equation for those pairs in their hand and put the pairs face up on the table.
  2. Play begins by each player's passing 3 of the remaining cards to the player to his or her right. If new pairs are formed from this action, players add these to the spread in front of them.
  3. To begin the draw, the player to the left of the dealer draws a card from the hand of the player to his or her left. If the drawn card completes a pair, the player plays the pair face up with the others. Otherwise, the player keeps the card, and the next person to the left draws from the player to his or her left.
  4. Play continues until all the pairs are formed, leaving 1 player with the “Crazy Conic” card. This person is the loser. As players' hands are depleted, they drop out of the game.

Variation: The player left with the “Crazy Conic” card is the winner!

### Equation Cards

Equation cards should display the following equations, 1 per card:

$$x^2 + y^2 = 36$$

$$x^2 + y^2 = 25$$

$$(x - 4)^2 + (y - 4)^2 = 16$$

$$(x + 3)^2 + (y + 3)^2 = 9$$

$$(x - 4)^2 + (y - 6)^2 = 25$$

$$(x + 3)^2 + (y - 2)^2 = 25$$

$$y = x^2$$

$$y = \frac{1}{2}x^2$$

$$y = \pm\sqrt{x}$$

$$y = -x^2$$

$$y = x^2 - 3$$

$$y = (x + 3)^2$$

$$y = (x - 2)^2 - 4$$

$$\frac{x^2}{36} + \frac{y^2}{16} = 1$$

$$\frac{x^2}{36} + \frac{y^2}{4} = 1$$

$$\frac{x^2}{16} + \frac{y^2}{4} = 1$$

$$\frac{x^2}{100} + \frac{y^2}{256} = 1$$

$$\frac{4x^2}{81} + \frac{y^2}{36} = 1$$

$$\frac{x^2}{36} + \frac{(y - 5)^2}{16} = 1$$

$$\frac{(x - 4)^2}{9} + \frac{(y - 3)^2}{25} = 1$$

$$\frac{x^2}{9} - \frac{y^2}{25} = 1$$

$$\frac{y^2}{16} - \frac{x^2}{9} = 1$$

$$\frac{x^2}{16} - \frac{y^2}{9} = 1$$

$$\frac{y^2}{9} - \frac{x^2}{16} = 1$$

$$\frac{x^2}{4} - \frac{y^2}{25} = 1$$

$$\frac{y^2}{4} - \frac{x^2}{9} = 1$$

# "Crazy Conic" Playing Cards

