

Practice C

Identifying Conic Sections

Identify the conic section that each equation represents.

1. $2x^2 + 2y^2 - 36x - 2y + 162 = 0$

2. $x - 2 = 5(y + 1)^2$

~~3. $x^2 - 2xy + 2y^2 + 3x - y + 1 = 0$~~

4. $x^2 + y^2 - 4x + 4y - 17 = 0$

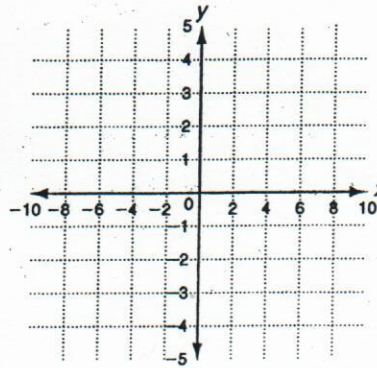
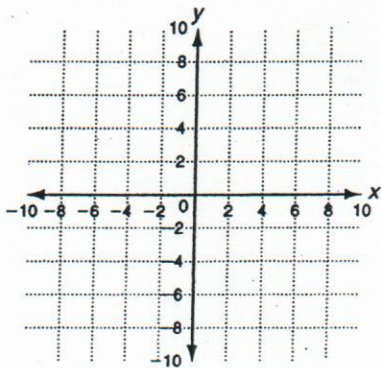
5. $x^2 + 4y^2 - 2x - 16y + 1 = 0$

6. $x^2 + y^2 + 22x - 10y + 121 = 0$

Find the standard form of each equation by completing the square. Then identify and graph each conic.

7. $25x^2 + 9y^2 - 50x + 36y - 164 = 0$

8. $4y^2 + x - 12y + 12 = 0$



Solve.

9. A hill on a roller coaster can be modeled by the equation $x^2 - 360x + 15y - 15,600 = 0$ measured in feet.

a. Write the equation in standard form.

b. What is the height at the beginning of the hill?

c. What is the maximum height of the hill?
