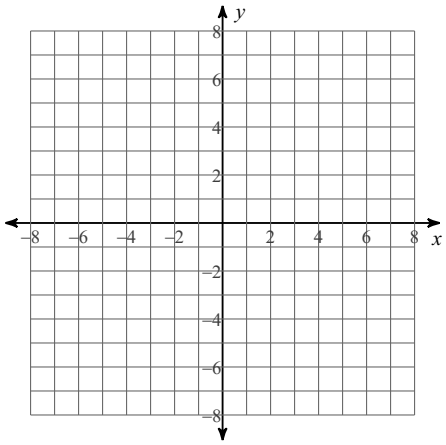
Pre-Calculus AB Name_____

Worksheet 44 - Conic Sections

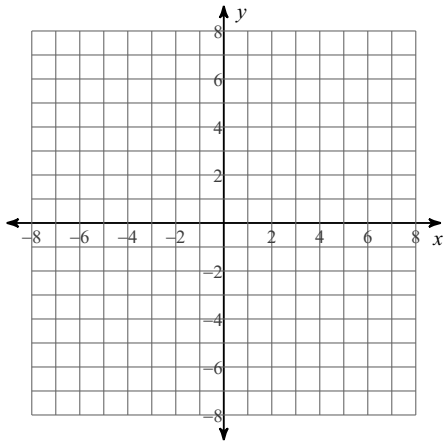
Date_____ Period____

Identify the center and radius of each. Then sketch the graph.

1) $x^2 + y^2 + 8x + 4y + 17 = 0$

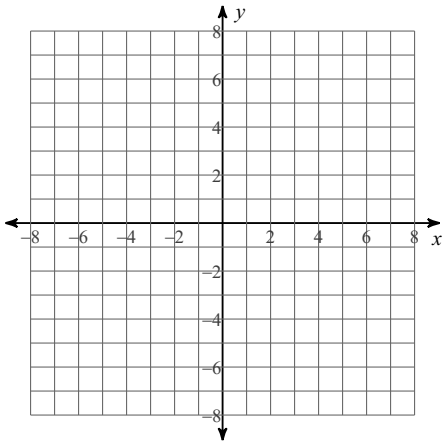


2) $x^2 + y^2 - 2x - 2y - 10 = 0$

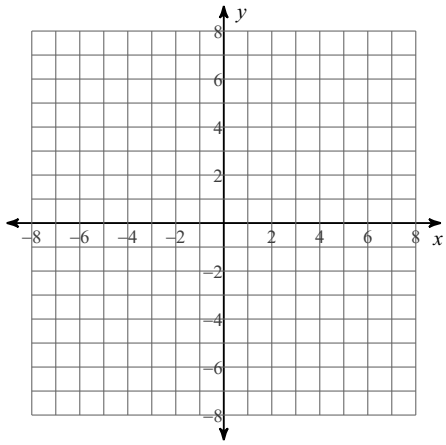


Identify the center and vertices of each. Then sketch the graph.

3) $4x^2 + 9y^2 - 24x - 54y + 81 = 0$

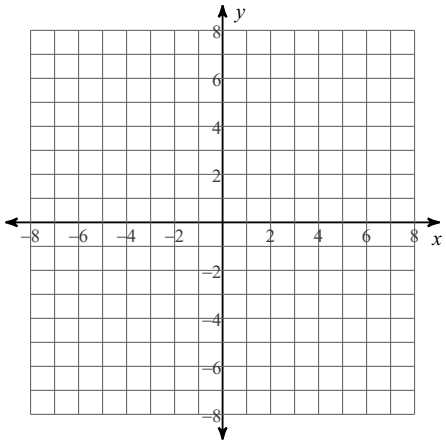


4) $4x^2 + y^2 - 8x + 2y - 11 = 0$

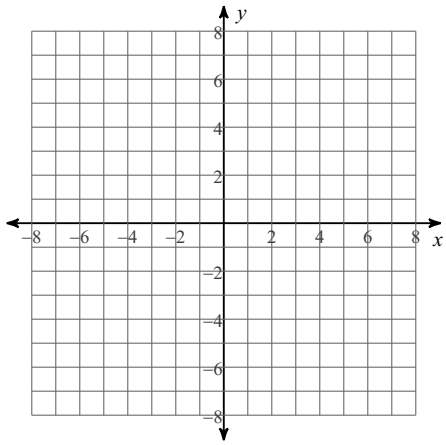


Identify the vertices and asymptotes of each. Then sketch the graph.

5) $9x^2 - y^2 + 36x + 4y + 23 = 0$

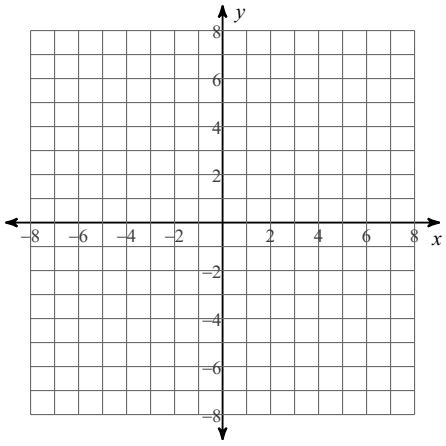


6) $4x^2 - y^2 + 20x + 9 = 0$

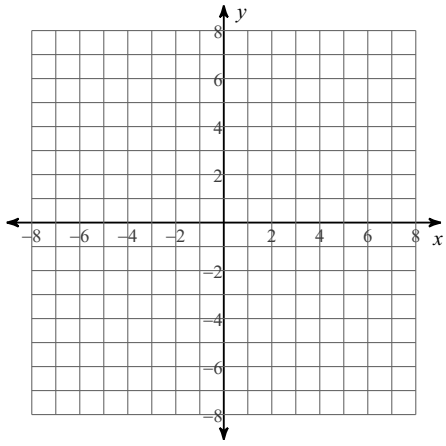


Identify the vertex and axis of symmetry of each. Then sketch the graph.

7) $x^2 - 10x + y + 29 = 0$

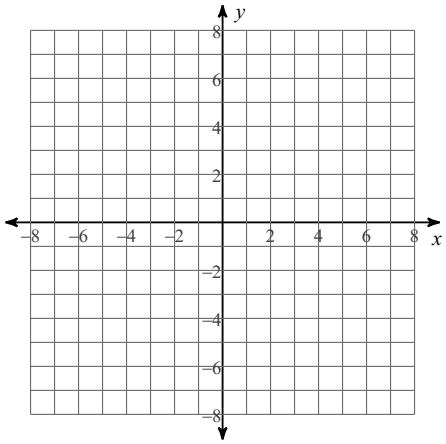


8) $-x^2 + 6x + y - 13 = 0$

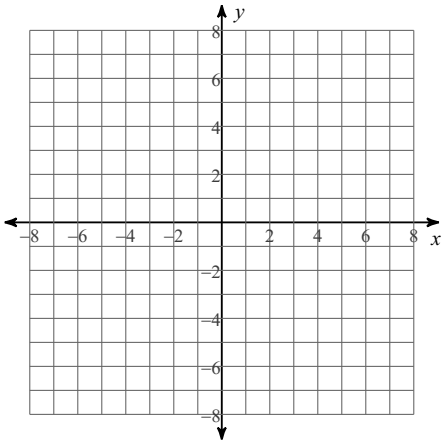


Classify each conic section, write its equation in standard form, and sketch its graph.

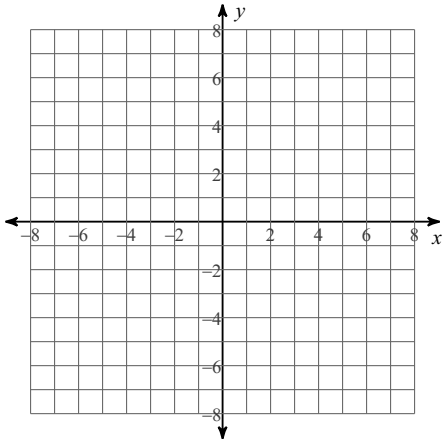
9) $-4x^2 + y^2 - 24x + 6y - 31 = 0$



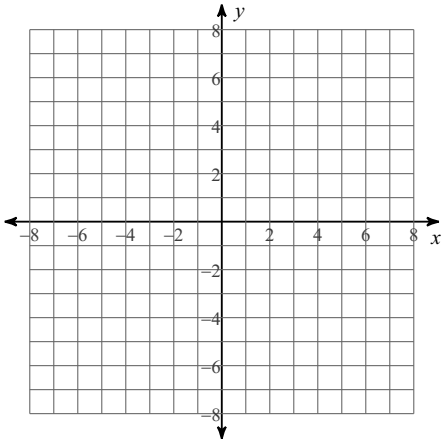
10) $x^2 + y^2 - 6x + 5 = 0$



11) $-x^2 + 2x + y + 1 = 0$



12) $x^2 + 9y^2 + 4x + 108y + 319 = 0$



Expand completely.

13) $(2u^2 - 1)^4$

14) $(y + 3x^3)^5$

Find each term described.

15) 4th term in expansion of $(x - 2y^3)^7$

16) 5th term in expansion of $(x - 2y^4)^7$

Find all solutions to each equation in radians.

17) $3\csc\left(-2\theta + \frac{2\pi}{3}\right) = -4 + \csc\left(-2\theta + \frac{2\pi}{3}\right)$

18) $-4 + 3\cot\left(2\theta + \frac{2\pi}{3}\right) = -\cot\left(2\theta + \frac{2\pi}{3}\right)$