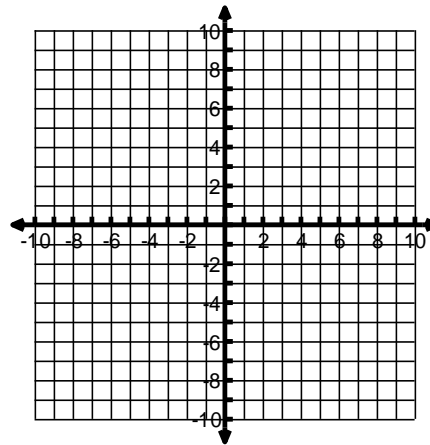


Identify each type of conic.

1. $\frac{(x+3)^2}{12} - \frac{(y-4)^2}{12} = 1$
2. $x^2 + y^2 = 9$
3. $y^2 - 2y - 4x - 7 = 0$
4. $7x^2 - 42x - 2y^2 + 8y - 27 = 0$
5. $9x^2 + 18x + 25y^2 - 10y + 38 = 0$

6. Graph the circle: $(x+2)^2 + y^2 = 16$

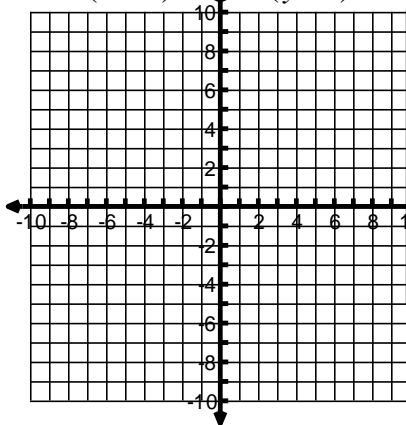


Center:

Radius:

Graph each of the following:

7. $(x+2)^2 = -12(y-1)$



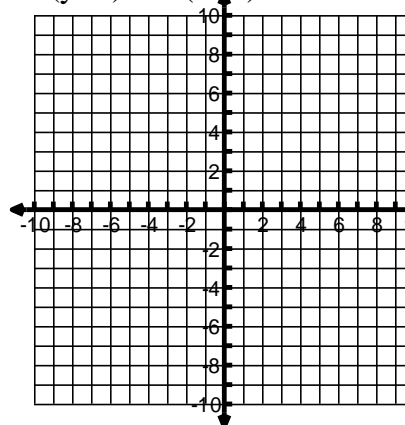
Vertex:

Focus:

Directrix:

AOS:

8. $(y-1)^2 = 8(x-1)$



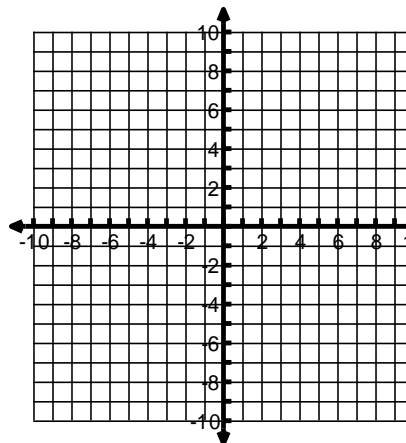
Vertex:

Focus:

Directrix:

AOS:

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



Center:

Vertices:

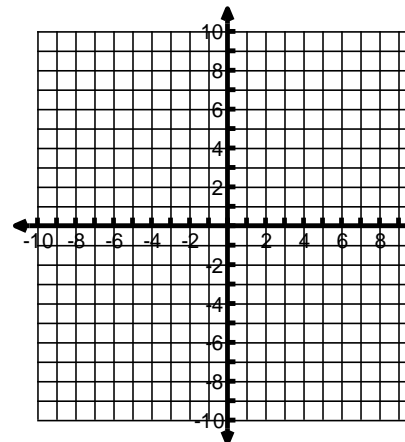
Co-vertices:

Foci:

Major:

Minor:

10. $\frac{x^2}{9} + \frac{(y-1)^2}{16} = 1$



Center:

Vertices:

Co-vertices:

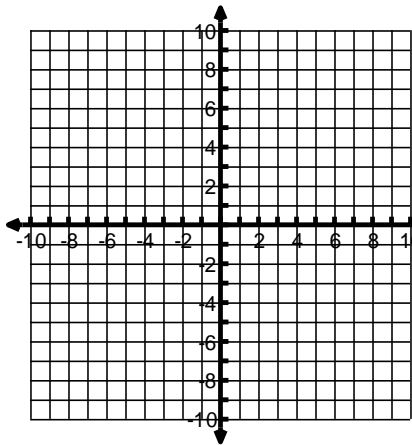
Foci:

Major:

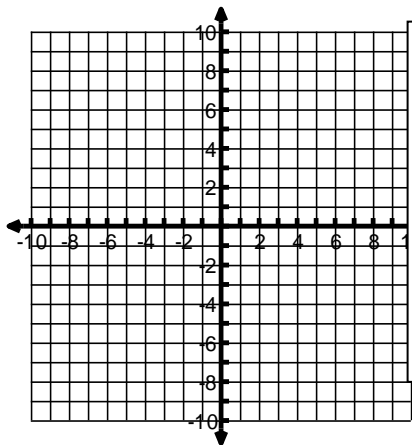
Minor:

11. $\frac{(x+1)^2}{9} - \frac{(y+2)^2}{16} = 1$

12. $\frac{y^2}{16} - \frac{(x-3)^2}{16} = 1$



Center:
 Vertices:
 Foci:
 Transverse:
 Conjugate:



Center:
 Vertices:
 Foci:
 Transverse:
 Conjugate:

13. Write the equation of the parabola with focus (3, -2) and directrix $x = -5$.

14. Solve the following system of equations: $x = 2 + y$; $x^2 + y^2 = 100$.

15. Solve the following system of equations: $y = -x - 1$; $y^2 - x - 2y - 3 = 0$

16. Write the equation of the parabola with vertex $(2, -1)$ and focus $(4, -1)$

17. Write the equation of the circle with center $(3, 4)$ and Area = 25π

18. Identify and write the equation of the given conic: $x^2 + 4y^2 - 2x - 24y + 33 = 0$

19. Identify and write the equation of the given conic: $4x^2 - 25y^2 - 24x - 64 = 0$

Cumulative Review Questions:

1. Perform the indicated operation: $\begin{bmatrix} 3 & 0 \\ 2y & 1 \end{bmatrix} * \begin{bmatrix} -2 & 3 \\ x & -4 \end{bmatrix}$

2. Perform the indicated operation: $\begin{bmatrix} x & 2 \\ -1 & 4 \end{bmatrix}^{-1}$

3. If $|X| = 26$, then find the value of r: $X = \begin{bmatrix} 3 & r \\ -5 & 2 \end{bmatrix}$

4. Solve the following system: $\begin{cases} 2x - 3y = 16 \\ x - 2y = 9 \end{cases}$