

Sketch the graph of the given equation and fill in the blanks for the given information.

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

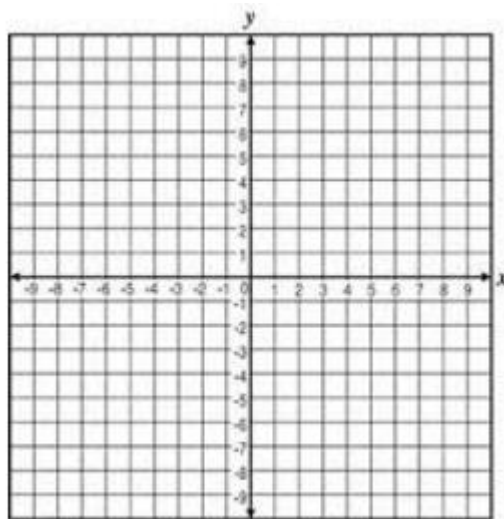
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



2.) $(y + 2)^2 = 16(x + 3)$

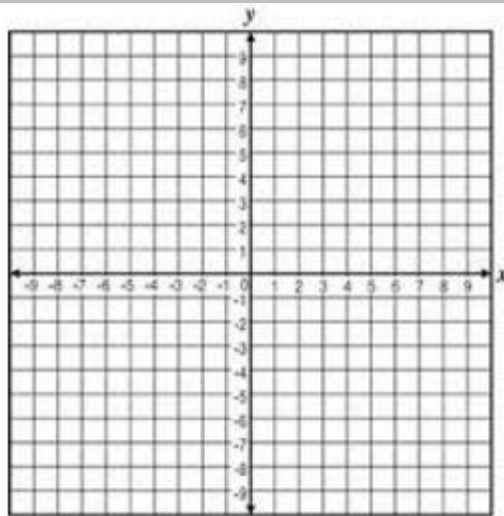
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



3.) $(y - 1)^2 = 8(x + 3)$

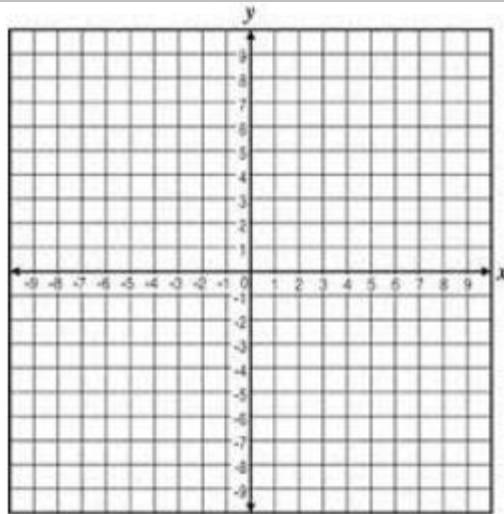
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



4.) $(x-1)^2 = -2(y-4)$

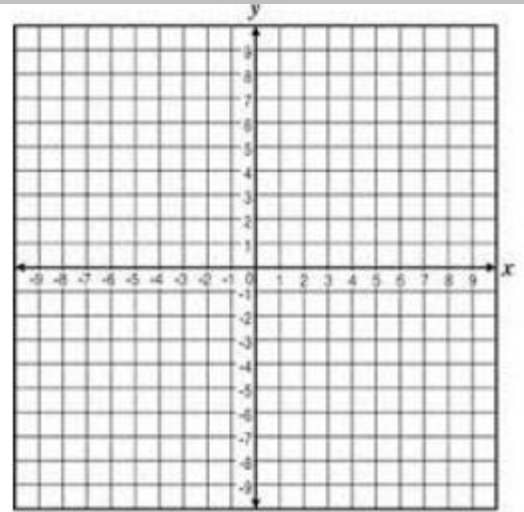
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



5.) $(y-1)^2 = -2(x-4)$

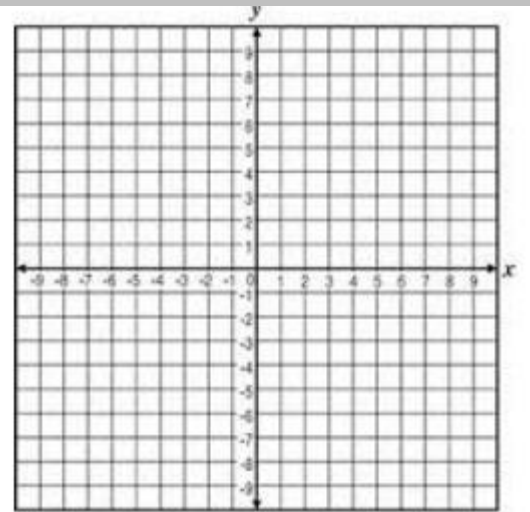
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



6.) $y^2 + 6y + 8x + 25 = 0$

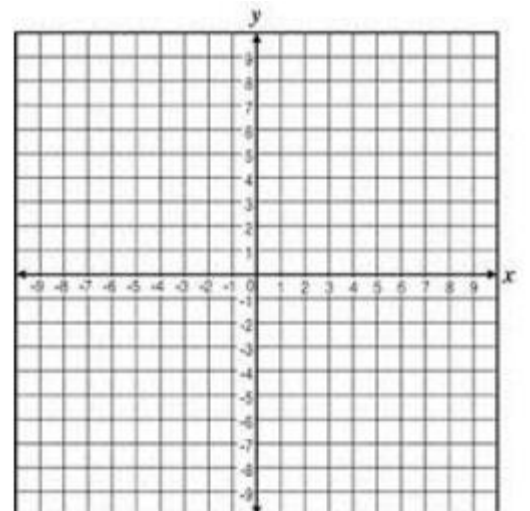
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



7.) $x^2 - 2x + 8y + 9 = 0$

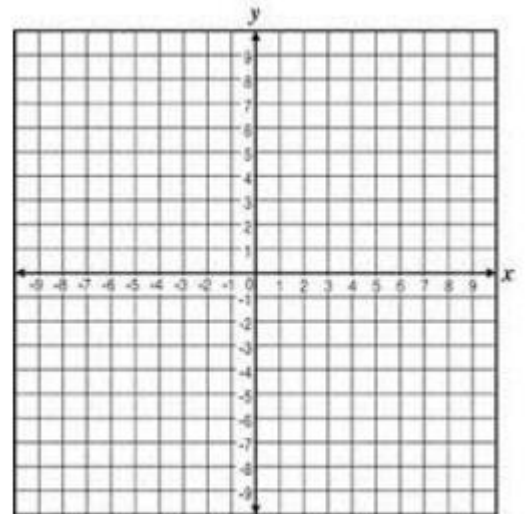
Coordinate of Vertex:

Direction it opens:

Axis of Symmetry:

Coordinates of Focus:

Equation of Directrix:



Find an equation for the parabola that satisfies the given condition.

8.) Vertex: $(0, 0)$, Focus: $(-3, 0)$

9.) Vertex: $(-4, -4)$, Focus: $(-2, -4)$

10.) Vertex: $(-5, 6)$, Focus: $(-5, 3)$

11.) Vertex: $(4, 3)$, directrix: $x = 6$

Find an equation for the parabola that satisfies the given condition.

12.) Vertex: $(1, -5)$, directrix: $y = -9$

13.) Vertex: $(-2, -8)$, directrix: $x = 0$

14.) Focus: $(0, 1)$, directrix: $x = 10$

15.) Focus: $(-4, 9)$, directrix: $x = -6$