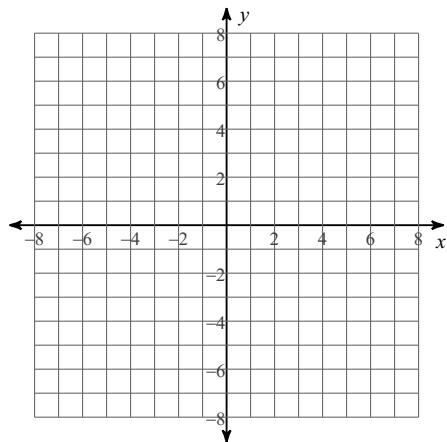


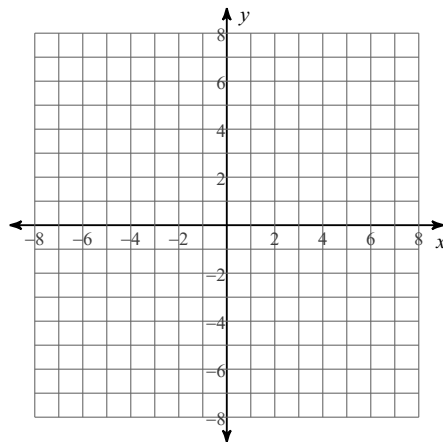
Focus & Directrix of a Parabola

Identify the focus and directrix of each. Then sketch the graph.

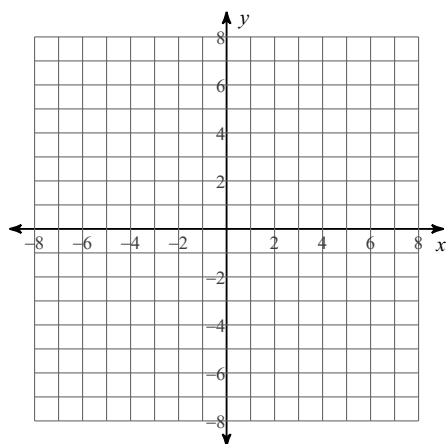
1) $y = -x^2$



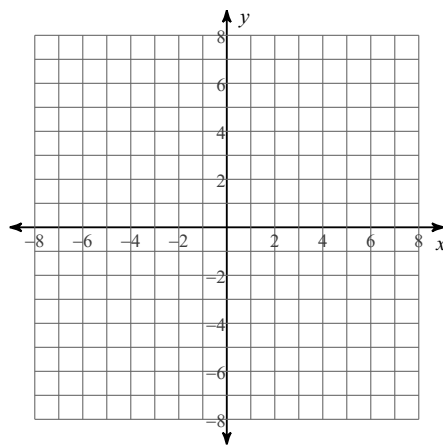
2) $x = y^2$



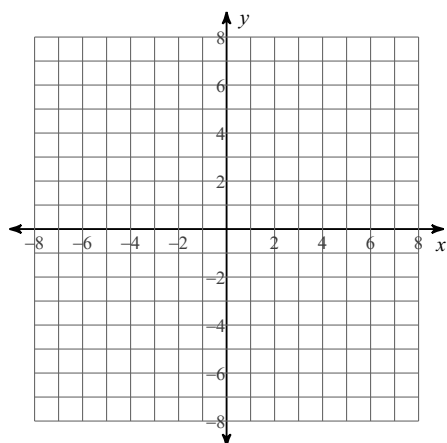
3) $x = -2y^2$



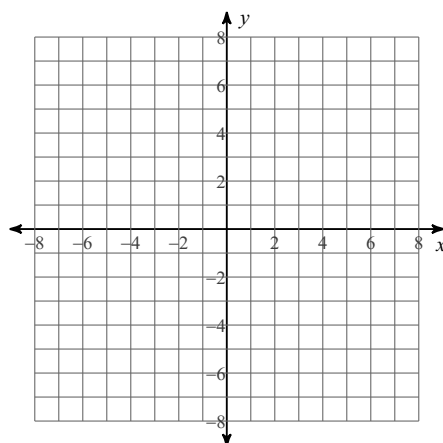
4) $x = -\frac{1}{4}y^2$



5) $x = -y^2$



6) $x = -8y^2$



Use the information provided to write the vertex form equation of each parabola.

7) Vertex at origin, Focus: $\left(0, \frac{1}{4}\right)$

8) Vertex at origin, Focus: $(0, 1)$

9) Vertex at origin, Focus: $\left(-\frac{3}{4}, 0\right)$

10) Vertex at origin, Focus: $\left(0, \frac{1}{20}\right)$

11) Vertex at origin, Focus: $\left(0, \frac{1}{8}\right)$

12) Vertex at origin, Focus: $\left(0, -\frac{1}{8}\right)$

13) Vertex at origin, Directrix: $y = -\frac{1}{4}$

14) Vertex at origin, Directrix: $x = -\frac{1}{4}$

15) Vertex at origin, Directrix: $y = -\frac{1}{12}$

16) Vertex at origin, Directrix: $x = \frac{1}{4}$

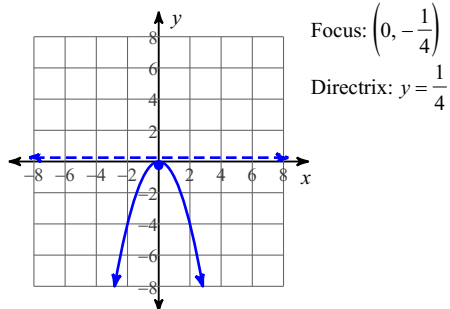
17) Vertex at origin, Directrix: $x = \frac{1}{12}$

18) Vertex at origin, Directrix: $y = \frac{1}{36}$

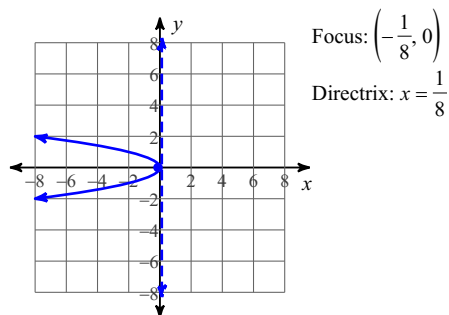
19) To complete this assignment, go to www.deltamath.com and complete the remaining Focus & Directrix problems found there.

Answers to Focus & Directrix of a Parabola

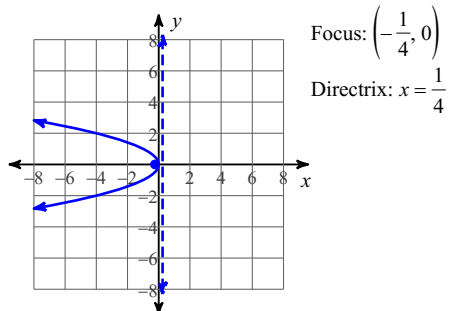
1)



3)



5)



7) $y = x^2$

9) $x = -\frac{1}{3}y^2$

11) $y = 2x^2$
19)

13) $y = x^2$

15) $y = 3x^2$

17) $x = -3y^2$