

The Focus and the Directrix are located an equal distance from the Vertex and on opposite sides. The variable c is used to represent this distance. The relationship between a , the coefficient of x^2 or y^2 and c is: $|a| = \frac{1}{4c}$ or $c = \frac{1}{4|a|}$

1. For each parabola, sketch and label the location of the focus (F), vertex (V), and directrix (D), then write down either $y = ax^2$ or $x = ay^2$ for the general form of the equation and tell if a is positive or negative.

a) Gen Eq:

b) Gen Eq:

c) Gen Eq:

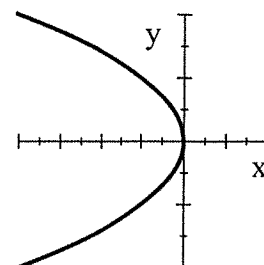
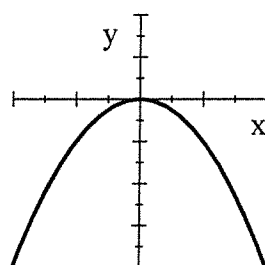
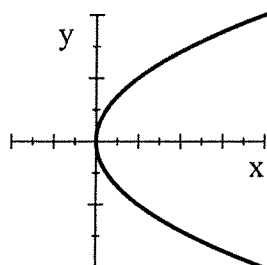
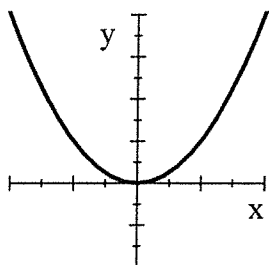
d) Gen Eq:

a is

a is

a is

a is



Write the equation of each parabola. The vertex of each is the origin.

1. The Focus is $(0, -2)$.2. The Focus is $(\frac{1}{12}, 0)$.

EQ:

EQ:

3. The Directrix is the line $y = -5$.

EQ:

State the coordinates of the Focus and the Equation of the Directrix. The vertex is the origin for all of these.

4. $y = 7x^2$

Focus:

5. $x = 10y^2$

Focus:

Eq. of Directrix:

Eq. of Directrix:

6. $y = -\frac{1}{6}x^2$

Focus:

Eq. of Directrix: