Name : _____ Score : _____

Teacher : _____ Date : _____

# Writing Equations of Parabolas

**Use the info given to write the vertex form of each parabola.**

1) Vertex at origin, Opens Right , and distance between vertex and focus: $\frac{1}{16}$ units

2) Directrix: y = $\frac{1}{12}$, Focus: (3 , $\frac{1}{-12}$)

3) Vertex at origin, Directrix: y = $\frac{-1}{16}$

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

5) Vertex at (-4,-5), Directrix: y = $\frac{-81}{16}$

6) Passes through points: (5, -6); (4, 0); (3, 10) , and Opens Up or Down

7) Vertex at (1,-5), Focus: (1 , $\frac{41}{-8}$)

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

9) Vertex at (-2,-7), Y-Intercept: -15

10) Passes through points: (-3, -16); (-2, -11); (-1, -8) , and Opens Up or Down

Name : _____ Score : _____

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# Writing Equations of Parabolas

**Use the info given to write the vertex form of each parabola.**

1) Vertex at origin, Opens Right , and distance between vertex and focus: $\frac{1}{16}$ units

$x = 4y^2$

2) Directrix: $y = \frac{1}{12}$, Focus: $(3 , \frac{1}{-12})$

$y = -3(x - 3)^2$

3) Vertex at origin, Directrix: $y = \frac{-1}{16}$

$y = 4x^2$

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

$y = -2x^2$

5) Vertex at (-4,-5), Directrix: $y = \frac{-81}{16}$

$y = 4(x + 4)^2 - 5$

6) Passes through points: (5, -6); (4, 0); (3, 10) , and Opens Up or Down

$y = 2(x - 6)^2 - 8$

7) Vertex at (1,-5), Focus: $(1 , \frac{41}{-8})$

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

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

$y = 2x^2$

9) Vertex at (-2,-7), Y-Intercept: -15

$y = -2(x + 2)^2 - 7$

10) Passes through points: (-3, -16); (-2, -11); (-1, -8) , and Opens Up or Down

$y = -x^2 - 7$