

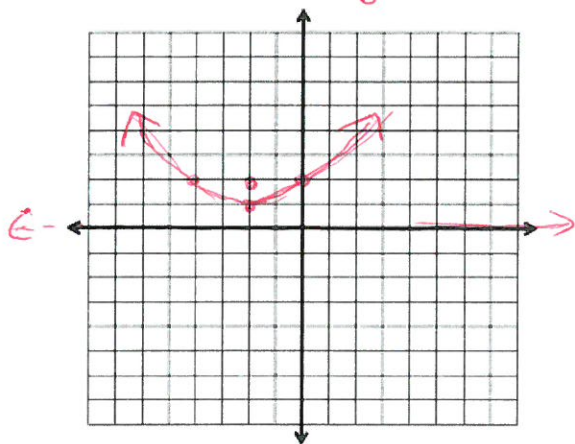
Name: Answer Key
Serafino • Precalculus S2

Per: _____ Date: _____

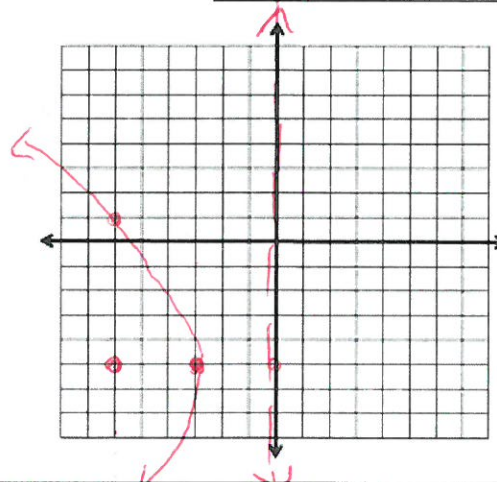
10A Parabolas – Skills Check Practice

Classwork / Homework

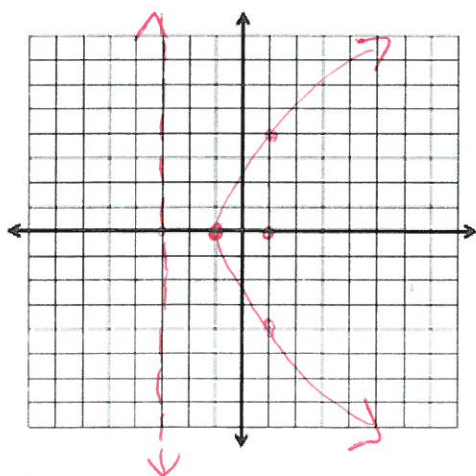
1. $(x + 2)^2 = 4(y - 1)$

Function/ Not a Function Not a Function Opens: upVertex $(-2, 1)$ $p =$ 1Focal Width 4 Focus $(-2, 2)$ Equation of Directrix $y = 0$ 

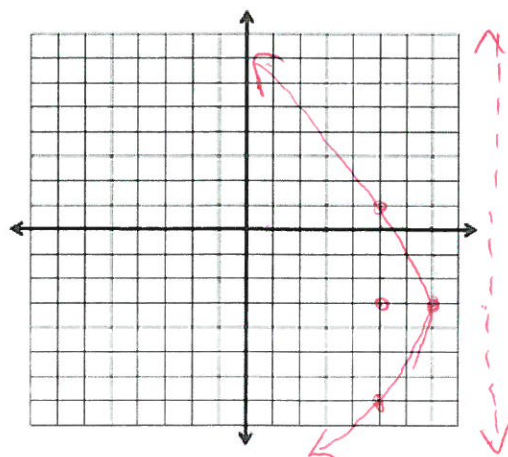
3. $(y + 5)^2 = -12(x + 3)$

Function/ Not a Function Opens: leftVertex $(-3, -5)$ $p =$ 3Focal Width 12 Focus $(-6, -5)$ Equation of Directrix $x = 0$ 

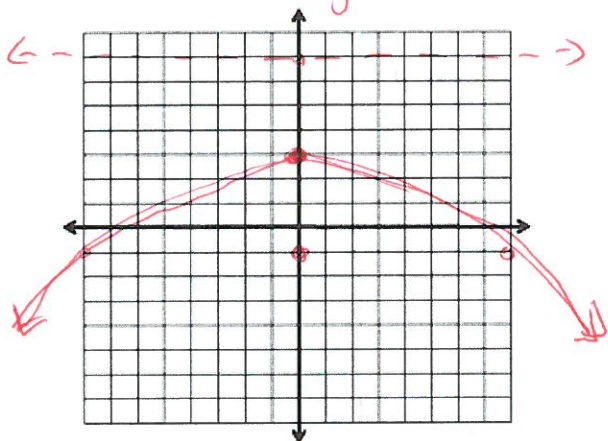
2. $y^2 = 8(x + 1)$

Function/ Not a Function Opens: rightVertex $(-1, 0)$ $p =$ 2Focal Width 8 Focus $(1, 0)$ Equation of Directrix $x = -3$ 

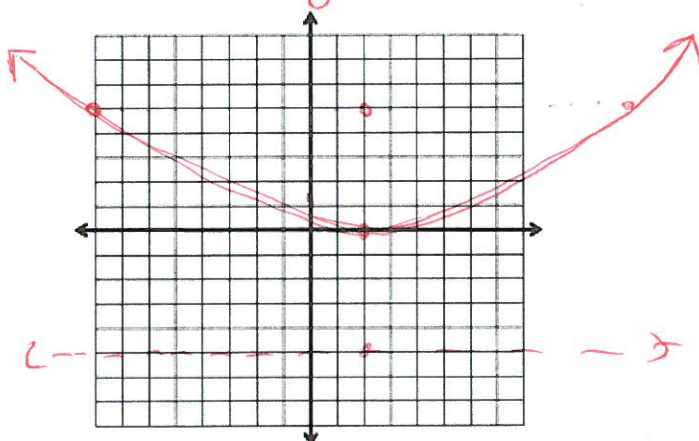
4. $(y + 3)^2 = -8(x - 7)$

Function/ Not a Function Opens: leftVertex $(7, -3)$ $p =$ 2Focal Width 8 Focus $(9, -3)$ Equation of Directrix $x = 9$ 

5. $x^2 = -16(y-3)$

Function/ Not a Function Opens: downVertex (0, 3) p = 4Focal Width 16 Focus (0, -1)Equation of Directrix y = 7

6. $(x-2)^2 = 20y$

Function/ Not a Function Opens: upVertex (2, 0) p = 5Focal Width 20 Focus _____Equation of Directrix y = -5

Write the equation of the Parabola with the given properties. Sketch if it helps.

7. vertex (3,7) and directrix y=4

$$\begin{array}{l} \text{up,} \\ p=3 \end{array} \quad (x-3)^2 = 12(y-7)$$

10. vertex (0,4) and focus (3,4)

$$\begin{array}{l} \text{right} \\ p=3 \end{array} \quad (y-4)^2 = 12x$$

8. vertex (2, -1) and directrix x=3

$$\begin{array}{l} \text{left} \\ p=1 \end{array} \quad (y+1)^2 = -4(x-2)$$

11. focus (0,2) and directrix y=8

$$\begin{array}{l} \text{down} \\ p=3 \end{array} \quad x^2 = -12(y-5)$$

9. vertex (-4, 2) and focus (-5, 2)

$$\begin{array}{l} \text{left} \\ p=1 \end{array} \quad (y-2)^2 = -4(x+4)$$

12. focus (3, -1) and directrix x=-5

$$\begin{array}{l} \text{right} \\ p=4 \end{array} \quad (y+1)^2 = 16(x+1)$$