

1. If $2 - 5i$ is one solution to a quadratic equation, what is the other solution?
2. If the discriminant of a quadratic equal to -14 , how many real roots does the quadratic function have?
3. Simplify $\sqrt{-288}$
4. If the focus of a quadratic is located above the directrix, which way does the graph open?

Objectives **Review content for the Quadratics Unit**
Provide any extra practice needed

Homework **Finish your study guide**

Write an equation of a parabola with the given vertex and focus.

1. vertex (0, 0); focus (0, 4)

$$|p| = 4 \quad y = \frac{1}{4(4)}x^2 = \frac{1}{16}x^2$$

2. vertex (4, 7); focus (4, 4)

$$|p| = 3, \quad a = \frac{1}{4(3)} = \frac{1}{12}, \quad y = \frac{1}{12}(x-4)^2 + 7$$

3. vertex (5, 2); focus (5, 9)

$$|p| = 7 \quad y = \frac{1}{29}(x-5)^2 + 2$$

4. Find the focus of a quadratic with a vertex of (3, -5) and a directrix of $y = -9$.

$$|p| = 4 \quad \text{focus } (3, -1)$$

Identify the vertex, the focus, and the directrix of the parabola with the given equation. Then sketch the graph of the parabola.

5. $y = \frac{1}{12}x^2$

$V(0, 0)$

$$\frac{1}{12} = \frac{1}{4p}$$

$F(0, 3)$

$p = 3$

$d \quad y = -3$

6. $y = \frac{1}{2}(x-1)^2 + 3$

$V(1, 3)$

$$\frac{1}{2} = \frac{1}{4p}$$

$f(1, 2.5)$

$p = \frac{1}{2}$

$d \quad y = 3.5$

7. $y + 1 = -\frac{1}{4}(x-3)^2$

$V(3, -1)$

$$-\frac{1}{4} = \frac{1}{4p}$$

$F(3, -2)$

$p = -1$

$d \quad y = 0$

8. Find the value for p for the parabola $y = \frac{1}{10}(x+6)^2 + 2$?

$$\frac{1}{10} = \frac{1}{4p}, \quad p = \frac{10}{4} = \frac{5}{2}$$

Graphing

Find Min and Max

Find Zeros

Find the intercepts of two different functions

Clear Memory

$2^{\text{nd}} + 7 1 2$

Entering Data For Regressions

STAT EDIT then enter data in L1 and L2

Creating Regression Equation

STAT CALC 5:QuadReg

To store regression equation in Y1

VARS Y-VARS enter enter

Reset Window

Zoom Standard

Study Guide key is on the website. Look at the top of the page next to the blank study guide.