

Chapter 4 Review

Write the letter for the correct answer in the blank at the right of each question.

1. Identify the y-intercept and the axis of symmetry for the graph of

$$f(x) = 10x^2 + 40x + 42.$$

- A 42; $x = 4$ B 0; $x = -4$ C 42; $x = -2$ D -42; $x = 2$

1. _____

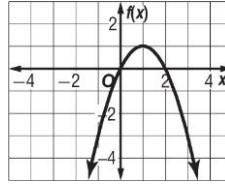
2. Identify the quadratic function graphed at the right.

F $f(x) = -x^2 - 2x$

G $f(x) = -x^2 + 2x$

H $f(x) = x^2 - 2x$

J $f(x) = -(x + 2)^2$



2. _____

3. Determine whether $f(x) = 4x^2 - 16x + 6$ has a maximum or a minimum value and find that value.

- A minimum; -10 B minimum; 2 C maximum; -10 D maximum; 2

3. _____

4. Solve $-x^2 = 4x$ by graphing. If exact roots cannot be found, state the consecutive integers between which the roots are located.

F 4, 0 H -4, 0

G between -4 and 4 J -2, 4

4. _____

5. Solve $x^2 - 3x = 18$ by factoring.

- A {6} B {-6, 3} C {-9, 2} D {-3, 6}

5. _____

6. Which quadratic equation has roots -2 and $\frac{1}{5}$?

F $x^2 + 4x + 4 = 0$ H $5x^2 - 9x - 2 = 0$

G $5x^2 + 9x - 2 = 0$ J $5x^2 - 11x + 2 = 0$

6. _____

7. Simplify $(4 - 12i) - (-8 + 4i)$.

- A $12 - 8$ B 28 C $12 - 16i$ D $12 + 16i$

7. _____

8. Simplify $\frac{4 - 2i}{7 + 3i}$.

- F $\frac{11}{29} - \frac{13}{29}i$ G $\frac{11}{29} - \frac{14}{29}i$ H $\frac{13}{29} - \frac{17}{29}i$ J $\frac{11}{29} - \frac{13}{29}i$

8. _____

9. To solve $9x^2 - 12x + 4 = 49$ by using the Square Root Property, you would first rewrite the equation as _____.

A $9x^2 - 12x - 45 = 0$ C $(3x - 2)^2 = 7$

B $(3x - 2)^2 = \pm 49$ D $(3x - 2)^2 = 49$

9. _____

10. Find the value of c that makes $x^2 - 9x + c$ a perfect square.

- F $\frac{81}{4}$ G $\frac{9}{2}$ H $-\frac{81}{4}$ J 81

10. _____

