NAME _____ DATE _____ PERIOD _____

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Chapter 10 Vocabulary Test/Review

SCORE _____

axis of symmetry	exponential decay	maximum	quadratic function
common ratio	exponential function	minimum	roots
completing the square	exponential growth	parabola	symmetry
compound interest	geometric means	quadratic equation	vertex
discriminant	geometric sequence	Quadratic Formula	zeros

Write whether each sentence is *true* or *false*. If false, replace the underlined word or words to make a true sentence.

1. You need to find the values of x for which $f(x) = 0$ to find the minimum of a function. **1.** _____

2. Symmetry is a geometric property of a vertex. **2.** _____

3. You can use the discriminant to determine the number of roots of a quadratic equation. **3.** _____

4. The formula for compound interest is a special case of the general equation for exponential growth. **4.** _____

5. You can divide any term in a geometric sequence by the preceding term to find the geometric means. **5.** _____

6. The vertex of a parabola is a minimum or maximum point. **6.** _____

7. The equation $A = C(1 - r)^t$ is the general equation for exponential decay. **7.** _____

8. The graph of a(n) exponential function is a parabola. **8.** _____

9. Completing the square is a method you can use to solve a(n) quadratic equation. **9.** _____

10. $y = 2^x$ is an example of a(n) quadratic function. **10.** _____

In your own words—
Define each term.

11. axis of symmetry

12. geometric means

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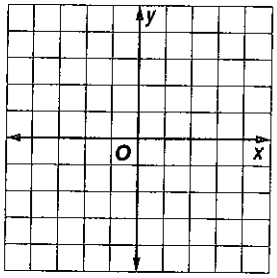
Chapter 10 Quiz

(Lessons 10–1 and 10–2)

SCORE _____

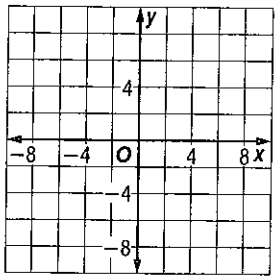
1. Use a table of values to graph $y = 2x^2 - 8x + 4$.

1.



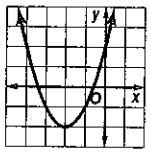
2. Write the equation of the axis of symmetry, and find the coordinates of the vertex of the graph of $y = -x^2 - 4x + 5$. Identify the vertex as a maximum or a minimum. Then graph the equation.

2.

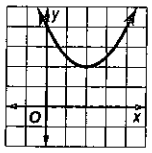


3. **Standardized Test Practice** Which graph corresponds with the equation $y + 2 = (x - 2)^2$?

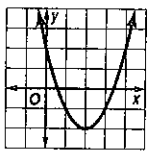
A.



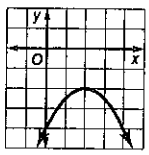
B.



C.



D.



Solve each equation by graphing. If integral roots cannot be found, estimate the roots by stating the consecutive integers between which the roots lie.

4. $x^2 - 2x - 24 = 0$

5. $3m^2 - 6m + 1 = 0$

3. _____

4. _____

5. _____

Assessment

NAME _____ DATE _____ PERIOD _____

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Chapter 10 Quiz

(Lessons 10–3 and 10–4)

SCORE _____

1. Solve $r^2 - 10r + 25 = 12$. Round to the nearest tenth if necessary.

1. _____

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

2. _____

3. Solve $w^2 + 8w - 10 = 10$ by completing the square. Round to the nearest tenth if necessary.

3. _____

4. Solve $4n^2 - 3n - 7 = 0$ by using the Quadratic Formula. Round to the nearest tenth if necessary.

4. _____

5. State the value of the discriminant for $3y^2 = y - 14$. Then determine the number of real roots of the equation.

5. _____