Name _____ Date _____ Class _____

CHAPTER 5

Quiz

Lesson 5-1 Through 5-6

Select the best answer.

1. Consider $h(x) = -x^2 + 8x + 15$. Identify its vertex and y-intercept.

A $(-4, -33)$; $(0, 15)$

B $(4, 31)$; $(0, -15)$

C $(4, 31)$; $(0, 15)$

2. If the parent function $f(x) = x^2$ is vertically stretched by a factor of 2, translated 14 units to the right, then translated 6 units up, write the resulting function $g(x)$ in vertex form.

F $f(x) = \frac{1}{2}(x - 14)^2 + 6$

G $f(x) = 2(x - 14)^2 + 6$

H $f(x) = 2(x - 14)^2 - 6$

3. Using $f(x) = x^2$ as a guide, describe the transformation that yields $f(x) = \frac{1}{9}(x + 12)^2 - 25$.

A vertical compression by $\frac{1}{9}$, 12 units right, 25 down

B horizontal stretch by $\frac{1}{9}$, 12 units left, 25 down

C vertical compression by $\frac{1}{9}$, 12 units left, 25 down

4. Find the minimum or maximum of $g(x) = x^2 + 9x - 36$.

F minimum of $56\frac{1}{4}$

G maximum of $56\frac{1}{4}$

H minimum of -36

5. Find all zeros of the trinomial $k(x) = 2x^2 + 33x - 54$.

A $(-18, 0)$, $\left(\frac{2}{3}, 0\right)$

B $(-18, 0)$, $\left(\frac{3}{2}, 0\right)$

C $(0, -18)$, $\left(0, \frac{3}{2}\right)$

6. Write a quadratic function in standard form having zeros of -9 and -12.

F $h(x) = x^2 - 21x + 108$

G $h(x) = x^2 + 21x - 108$

H $h(x) = x^2 + 21x + 108$

7. Complete the square to write $c(x) = x^2 - 16x + 84$ in vertex form.

A $c(x) = (x - 16)^2 - 172$

B $c(x) = (x - 8)^2 + 20$

C $c(x) = (x - 8)^2 + 84$

8. Simplify $i^9\sqrt{-289}$.

F -17

G $-17i$

H 17

CHAPTER 5

Section Quiz Lessons 5-1 Through 5-6

1. C
2. G
3. C
4. F
5. B
6. H
7. B
8. F