Name _____ Date _____ Class _____

CHAPTER 5

Quiz

Lessons 5-7 Through 5-9

Select the best answer.

1. Solve $36x^2 + 169 = 0$.

A $\pm\frac{6}{13}i$ **C** $\pm\frac{13}{6}$

B $\pm\frac{13}{6}i$

2. Use the Quadratic Formula to solve $x^2 - 4x + 18 = 0$.

F $-2 \pm i\sqrt{14}$ **H** $2 \pm i\sqrt{14}$

G $-2 \pm \sqrt{14}$

3. For the discriminant $\sqrt{(-6)^2 - 4 \cdot 4 \cdot 3}$, identify the number of solutions and their type(s).

A 2 real solutions

B 1 real and 1 complex solution

C 2 complex solutions

4. Solve $x^2 - 3x - 40 < 14$.

F $x < -6$ or $x > 9$

G $-6 < x < 9$

H $x < -8$ or $x > 5$

5. Solve $x^2 - 14x + 45 \geq -3$.

A $x \leq 5$ or $x \geq 9$

B $6 \leq x \leq 8$

C $x \leq 6$ or $x \geq 8$

6. Write a quadratic equation that fits the points $(-1, 3)$, $(0, 10)$, and $(5, -15)$.

F $f(x) = -2x^2 + 5x + 10$

G $f(x) = -\frac{8}{117}x^2 + \frac{4}{3}x + 10$

H $f(x) = \frac{2}{9}x^2 - \frac{13}{3}x + 10$

7. Selena is standing on a cliff that is 25 feet high. She tosses a pebble upward over the edge, where it hits the top of a 4-foot high tree stump. The quadratic equation that models the path of the pebble is $p(t) = -16t^2 + 10t + 25$. How long did it take for the pebble to bounce off of the tree stump?

A 0.75 seconds

B 1.25 seconds

C 1.50 seconds

8. Simplify $\frac{21 - 16i}{i^3}$.

F $-16 - 21i$

G $16 - 21i$

H $16 + 21i$

9. Simplify $(11 - 4i)(-5 - 9i)$.

A $-89 + 79i$

B $-55 - 80i$

C $-19 + 79i$

10. Simplify $|8 - 10i|$.

F 2

G $3\sqrt{2}$

H $2\sqrt{41}$

CHAPTER 5

Section Quiz Lessons 5-7 Through 5-9

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