Name _____ Date _____ Class _____

Quiz
Section A

Select the best answer.

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

   A $(-8, -113)$; $(0, 15)$

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

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

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

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

   J $f(x) = 2(x + 14)^2 + 6$

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

   D horizontal stretch by 9, 25 units left, 12 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

   J maximum of $24\frac{3}{4}$

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

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

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

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

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

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

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

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

   D $c(x) = (x - 8)^2 + 148$

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

   F -17 **H** 17

   G $-17i$ **J** $17i$

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Answer Key continued

36. F

37. D

38. F

39. B

40. G

41. D

42. F

43. C

CHAPTER 5

Section Quiz: Section A

1. D

2. G

3. C

4. F

5. B

6. J

7. B

8. F

Section Quiz: Section B

1. C

2. F

3. D

4. G

5. D

6. F

7. C

8. J

9. A

10. H

Chapter Test Form A

1. C

2. A

3. B

4. B

5. B

6. A

7. C

8. B

9. A

10. A

11. B

12. B

13. A

14. B

15. A

16. A

17. C

18. A

19. D

20. B

Chapter Test Form B

1. B

2. H

3. A

4. H

5. D

6. G

7. C

8. F

9. B

10. G

11. C

12. H

13. D

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