

Review Guide TEST 4 (Part 1)- Quadratic Functions Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor each completely. Show work.**

1)  $p^2 + p$

2)  $5k^2 + 40k$

3)  $x^2 - 11x + 28$

4)  $a^2 + 13a + 36$

5)  $2n^2 + 5n$

6)  $5a^2 - 31a - 28$

7)  $30b^3 - 114b^2 + 108b$

8)  $35x^2 + 60x - 20$

**Solve the equation by factoring. Show work. Also, show the completely factored form of the equation.**

9)  $n^2 + 4n + 3 = 0$

10)  $x^2 - 3x - 18 = 0$

11)  $p^2 - 8p + 15 = 0$

12)  $k^2 - 5k - 14 = 0$

13)  $8n^2 - 19n - 15 = 0$

14)  $2k^2 - 11k - 21 = 0$

15)  $6n^2 + n - 15 = 0$

16)  $4b^2 + 21b - 49 = 0$

$$17) 35m^2 - 98m + 62 = 6$$

$$18) 175x^2 - 105x - 193 = 3$$

**Solve each equation by taking square roots. Show work.**

$$19) 5r^2 + 6 = 456$$

$$20) 8 - 7a^2 = -531$$

$$21) 25m^2 + 10 = 91$$

$$22) 9k^2 + 10 = 334$$

$$23) 5r^2 - 9 = 491$$

$$24) 9r^2 + 8 = 584$$

$$25) (x - 4)^2 = 12$$

$$26) (3x - 7)^2 = 25$$

## Answers to Review Guide TEST 4 (Part 1)- Quadratic Functions (ID: 1)

1)  $p(p+1)$

5)  $n(2n+5)$

9)  $\{-1, -3\}$

13)  $\left\{-\frac{5}{8}, 3\right\}$

17)  $\left\{\frac{4}{5}, 2\right\}$

21)  $\left\{\frac{9}{5}, -\frac{9}{5}\right\}$

25)  $4 + 2\sqrt{3}$

2)  $5k(k+8)$

6)  $(5a+4)(a-7)$

10)  $\{6, -3\}$

14)  $\left\{-\frac{3}{2}, 7\right\}$

18)  $\left\{-\frac{4}{5}, \frac{7}{5}\right\}$

22)  $\{6, -6\}$

26)  $4, \frac{2}{3}$

3)  $(x-4)(x-7)$

7)  $6b(5b-9)(b-2)$

11)  $\{5, 3\}$

15)  $\left\{\frac{3}{2}, -\frac{5}{3}\right\}$

19)  $\{3\sqrt{10}, -3\sqrt{10}\}$

23)  $\{10, -10\}$

4)  $(a+4)(a+9)$

8)  $5(7x-2)(x+2)$

12)  $\{-2, 7\}$

16)  $\left\{\frac{7}{4}, -7\right\}$

20)  $\{\sqrt{77}, -\sqrt{77}\}$

24)  $\{8, -8\}$