

Factoring & Solving Quadratics - TEST REVIEW Date _____ Period _____

Factor the common factor out of each expression.

1) $-14p + 12$

2) $-4v^6 + 16v^5 - 8v^4$

Factor each completely.

3) $16n^2 - 1$

4) $n^2 + 8n - 20$

5) $9a^2 - 12a + 4$

6) $x^2 + 3x - 40$

7) $5n^2 + 17n - 12$

8) $16x^2 - 25$

9) $2n^2 - 2n - 12$

10) $6x^2 - 33x + 42$

11) $36x^2 - 64$

12) $9m^2 + 3m - 20$

Solve each equation by factoring.

13) $(6k - 1)(k + 1) = 0$

14) $2(x + 4)(x + 6) = 0$

15) $k^2 + 3k - 10 = 0$

16) $x^2 + 5x - 8 = -2$

17) $6k^2 + 17k - 20 = 8$

18) $5a^2 - 22a - 8 = 7$

Solve each equation with the quadratic formula: Rational Solutions

19) $6b^2 - b - 2 = 0$

20) $6k^2 + k - 100 = 0$

Use your calculator to solve each equation using the quadratic formula. Round to the nearest thousandth.

21) $3v^2 + 5v - 9 = -4$

22) $4v^2 + 3v - 4 = 0$

Solve each equation with the quadratic formula: Irrational Solutions

23) $8n^2 + 5n + 10 = 11$

24) $5b^2 + b - 4 = 3b^2$

25) $3x^2 - 2x - 4 = 0$

26) $4n^2 + 4n - 7 = 0$

Factoring & Solving Quadratics - TEST REVIEW

Date _____ Period _____

Factor the common factor out of each expression.

1) $-14p + 12$

$2(-7p + 6)$

2) $-4v^6 + 16v^5 - 8v^4$

$4v^4(-v^2 + 4v - 2)$

Factor each completely.

3) $16n^2 - 1$

$(4n + 1)(4n - 1)$

4) $n^2 + 8n - 20$

$(n - 2)(n + 10)$

5) $9a^2 - 12a + 4$

$(3a - 2)^2$

6) $x^2 + 3x - 40$

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

7) $5n^2 + 17n - 12$

$(5n - 3)(n + 4)$

8) $16x^2 - 25$

$(4x + 5)(4x - 5)$

9) $2n^2 - 2n - 12$

$2(n - 3)(n + 2)$

10) $6x^2 - 33x + 42$

$3(2x - 7)(x - 2)$

11) $36x^2 - 64$

$4(3x + 4)(3x - 4)$

12) $9m^2 + 3m - 20$

$(3m - 4)(3m + 5)$

Solve each equation by factoring.

13) $(6k - 1)(k + 1) = 0$

$$\left\{ \frac{1}{6}, -1 \right\}$$

14) $2(x + 4)(x + 6) = 0$

$$\{-4, -6\}$$

15) $k^2 + 3k - 10 = 0$

$$\{2, -5\}$$

16) $x^2 + 5x - 8 = -2$

$$\{-6, 1\}$$

17) $6k^2 + 17k - 20 = 8$

$$\left\{ \frac{7}{6}, -4 \right\}$$

18) $5a^2 - 22a - 8 = 7$

$$\left\{ -\frac{3}{5}, 5 \right\}$$

Solve each equation with the quadratic formula: Rational Solutions

19) $6b^2 - b - 2 = 0$

$$\left\{ \frac{2}{3}, -\frac{1}{2} \right\}$$

20) $6k^2 + k - 100 = 0$

$$\left\{ 4, -4\frac{1}{6} \right\}$$

Use your calculator to solve each equation using the quadratic formula. Round to the nearest thousandth.

21) $3v^2 + 5v - 9 = -4$

$$\{0.703, -2.37\}$$

22) $4v^2 + 3v - 4 = 0$

$$\{0.693, -1.443\}$$

Solve each equation with the quadratic formula: Irrational Solutions

23) $8n^2 + 5n + 10 = 11$

$$\left\{ \frac{-5 + \sqrt{57}}{16}, \frac{-5 - \sqrt{57}}{16} \right\}$$

24) $5b^2 + b - 4 = 3b^2$

$$\left\{ \frac{-1 + \sqrt{33}}{4}, \frac{-1 - \sqrt{33}}{4} \right\}$$

25) $3x^2 - 2x - 4 = 0$

$$\left\{ \frac{1 + \sqrt{13}}{3}, \frac{1 - \sqrt{13}}{3} \right\}$$

26) $4n^2 + 4n - 7 = 0$

$$\left\{ \frac{-1 + 2\sqrt{2}}{2}, \frac{-1 - 2\sqrt{2}}{2} \right\}$$