TPC Name_____ ID: 1

Quadratic Equations

Date_____ Period____

Solve each equation by factoring.

1) $x^2 = 6x$

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

3) $x^2 - 24 = -5x$

4) $5v^2 = -11v + 12$

5) $2k^2 = 20 - 3k$

6) $10b^2 + 6 = 19b$

Solve each equation by taking square roots.

7) $7x^2 + 8 = 260$

8) $10k^2 + 2 = 862$

9) $81p^2 - 3 = 46$

10) $-3 + 16n^2 = 1$

11) $9v^2 - 2 = 817$

Solve each equation by completing the square.

12) $m^2 - 8m + 21 = 6$

13) $r^2 - 6r - 81 = -9$

14) $10a^2 - 20a + 1 = -7$

15) $2x^2 + 9x + 5 = 10$

16) $7b^2 + 4b - 4 = 7$

17) $6r^2 + 12r - 13 = -8$

18) $n^2 - 2n - 28 = -4$

Solve each equation with the quadratic formula.

19) $6m^2 + 3m = 5$

20) $4x^2 = -2 - 11x$

21) $6v^2 - 13 = 4v$

22) $11b^2 - 16 = 10b$

23) $6v^2 + 7v = 18$

24) $4x^2 = 36$

Answers to Quadratic Equations (ID: 1)

1) $\{6, 0\}$

2) $\{-4, -7\}$

3) $\{3, -8\}$

4) $\left\{\frac{4}{5}, -3\right\}$

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

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

7) $\{6, -6\}$

8) $\left\{\sqrt{86}, -\sqrt{86}\right\}$

9) $\left\{\frac{7}{9}, -\frac{7}{9}\right\}$

10) $\left\{\frac{1}{2}, -\frac{1}{2}\right\}$

11) $\left\{\sqrt{91}, -\sqrt{91}\right\}$

12) $\{5, 3\}$

13) $\{12, -6\}$

14) $\left\{\frac{5+\sqrt{5}}{5}, \frac{5-\sqrt{5}}{5}\right\}$

15) $\left\{\frac{1}{2}, -5\right\}$

16) $\left\{1, -\frac{11}{7}\right\}$

17) $\left\{\frac{-6+\sqrt{66}}{6}, \frac{-6-\sqrt{66}}{6}\right\}$

18) $\{6, -4\}$

19) $\left\{\frac{-3+\sqrt{129}}{12}, \frac{-3-\sqrt{129}}{12}\right\}$

20) $\left\{\frac{-11+\sqrt{89}}{8}, \frac{-11-\sqrt{89}}{8}\right\}$

21) $\left\{\frac{2+\sqrt{82}}{6}, \frac{2-\sqrt{82}}{6}\right\}$

22) $\left\{\frac{5+\sqrt{201}}{11}, \frac{5-\sqrt{201}}{11}\right\}$

23) $\left\{\frac{-7+\sqrt{481}}{12}, \frac{-7-\sqrt{481}}{12}\right\}$

24) $\{3, -3\}$