

Solving Quadratics by Factoring - the Zero Product Property

Period _____

CLASS EXAMPLES: Solve each equation by factoring.

1) $(x + 7)(x - 8) = 0$

2) $6(m - 2)(5m + 7) = 0$

Solve each equation by factoring.

3) $a(a - 8) = 0$

4) $6(r - 4)(r - 5) = 0$

5) $(b - 5)(8b + 7) = 0$

6) $8(3x + 1)(x + 8) = 0$

CLASS EXAMPLES: Solve each equation by factoring.

7) $a^2 - 4 = 0$

8) $n^2 + 4n = 0$

Solve each equation by factoring.

9) $x^2 + 2x - 8 = 0$

10) $r^2 + 5r - 14 = 0$

11) $k^2 - 9k + 20 = 0$

12) $k^2 - 7k - 8 = 0$

CLASS EXAMPLES: Solve each equation by factoring.

13) $k^2 - 6k - 14 = -7$

14) $5m^2 - 9m + 6 = 2$

Solve each equation by factoring.

15) $x^2 - x - 6 = -6$

16) $x^2 - 12x + 29 = -3$

17) $3v^2 + 30v + 69 = -6$

18) $4v^2 + 8v - 17 = -5$

19) $5p^2 + 39p + 24 = -4$

20) $4p^2 - 33p = -8$

21) $35n^2 + 252n + 45 = -4$

22) $5k^2 + 2k - 1 = 6$

CLASS EXAMPLES: Solve each equation by factoring.

23) $105x^2 = -51x - 6$

24) $5n^2 - 22n - 43 = 5$

Solve each equation by factoring.

25) $3k^2 + 3k - 163 = 5$

26) $x^2 - 4x = 21$

27) $n^2 - 14n + 11 = 6 - 8n$

28) $x^2 - 2x - 16 = 8$

29) $2x^2 + 14x + 12 = 0$

30) $7a^2 - 8 = a$

31) $3r^2 + r + 2 = 2$

32) $14p^2 - 91p + 137 = -3$

Answers to Solving Quadratics by Factoring - the Zero Product Property

1) $\{-7, 8\}$

3) $\{8, 0\}$

5) $\left\{5, -\frac{7}{8}\right\}$

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

9) $\{2, -4\}$

11) $\{5, 4\}$

13) $\{7, -1\}$

15) $\{1, 0\}$

17) $\{-5\}$

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

21) $\left\{-\frac{1}{5}, -7\right\}$

23) $\left\{-\frac{2}{7}, -\frac{1}{5}\right\}$

25) $\{-8, 7\}$

27) $\{1, 5\}$

29) $\{-6, -1\}$

31) $\left\{-\frac{1}{3}, 0\right\}$