Name_____ Date_____ Period_____

SOLVE BY FACTORING WORKSHEET

To Solve a Quadratic Using Factoring:

1) Put the quadratic equation into standard form $ax^2 + bx + c = 0$
2) Factor the quadratic expression.
3) Set each factor equal to zero.
4) Solve each equation.
5) Check each **root** in the original equation.

Solve each equation.

1) $x^2 - 3x + 2 = 0$

2) $z^2 - 5z + 4 = 0$

3) $x^2 - 8x + 16 = 0$

4) $r^2 - 12r + 35 = 0$

5) $c^2 + 6c + 5 = 0$

6) $m^2 + 10m + 9 = 0$

7) $x^2 - 49 = 0$

8) $z^2 - 4 = 0$

9) $m^2 - 64 = 0$

10) $3x^2 - 12 = 0$

11) $d^2 - 2d = 0$

12) $s^2 - s = 0$

13) $2x^2 - 5x + 2 = 0$

14) $3x^2 - 10x + 3 = 0$

15) $3x^2 - 8x + 4 = 0$

16) $5x^2 + 11x + 2 = 0$

17) $y^2 = 8y + 20$

18) $x^2 = 9x - 20$

19) $x^2 = 30 + x$

20) $2x^2 - x = 15$

21) $x^2 + 3x - 4 = 50$

22) $2x^2 + 7 = 5 - 5x$

23) $y(y - 3) = 4$

24) $3q^2 - 10q = 8$

25) $\frac{x + 2}{2} = \frac{12}{x}$

26) $\frac{y + 3}{3} = \frac{6}{y}$

27) $\frac{x}{3} = \frac{12}{x}$

28) $10x^2 - 5x + 11 = 9x^2 + x + 83$

29) $4x^2 + 3x - 12 = 6x^2 - 7x - 60$

30) The width of a rectangle has measure x-2 and the length of the rectangle has a measure of x. Find x if the area is 35.