

Good morning: check hw answers here, have questions ready

Answers to Solving Quadratics by Factoring

1) $\{-4, -8\}$

2) $\{-6, -4\}$

3) $\{8, -6\}$

4) $\{-8, 3\}$

5) $\{-3, -7\}$

6) $\{-4, 5\}$

7) $\{8, 5\}$

8) $\{-8, 5\}$

Last assessment: Thursday

Last day to reassess any/all Q4 grades: Weds. May 22

More Factoring of Quadratics

Find the solutions.

$$4x^2 = 24x - 32$$

$$4x^2 - 24x + 32 = 0$$

$$4(x^2 - 6x + 8) = 0$$

$$4(x - 2)(x - 4) = 0$$

$$x - 2 = 0$$

$$x = 2$$

$$x - 4 = 0$$

$$x = 4$$

$\frac{1}{2}, 8$
 $\frac{2}{1}, 4$

$$3x^2 + 54 = 27x$$

$$\cancel{3x^2 + 54 - 27x = 0}$$

$$3x^2 - 27x + 54 = 0$$

$$3(x^2 - 9x + 18) = 0$$

$$3(x - 3)(x - 6) = 0$$

$$x - 3 = 0$$
$$x = 3$$

$$x - 6 = 0$$
$$x = 6$$

What about when there is no greatest common factor...
but the x^2 term is still not multiplied by one?

$$5x^2 - 43x - 18 = 0$$

$$(5x + 2)(x - 9) = 0$$

check:

$$5x^2 - 45x + 2x - 18$$

F.O.I.L.

$$5x + 2 = 0$$

$$5x = -2$$

$$x = -\frac{2}{5}$$

$$x - 9 = 0$$

$$x = 9$$

Include leading coefficient in binomials

$$18: \begin{array}{l} 1, 18 \\ 2, 9 \\ 3, 6 \end{array} \begin{array}{l} < 5, 18 \\ < 1, 90 \\ < 10, 9 \\ < 2, 45 \end{array}$$

When adding/subtracting,
you must multiply one of the factors
by a factor of the leading coefficient

Another!

$$3m^2 - 29m + 40 = 0$$

$$(3m - 5)(m - 8) = 0$$

check:

$$3m^2 - 24m - 5m + 40$$

$$3m - 5 = 0$$

$$3m = 5$$

$$m = 5/3$$

$$m - 8 = 0$$

$$m = 8$$

40:

1, 40

2, 20

4, 10

5, 8

12, 10

4, 30

15, 8

5, 24

Pick one to do

$$7v^2 - 48v + 36 = 0$$

$$(7v - 6)(v - 6) = 0$$

$$v = \frac{6}{7}, 6$$

$$36: 1, 36$$

$$2, 18$$

$$3, 12$$

$$4, 9$$

$$6, 6$$

$$\leftarrow \cancel{4}, 2, 6$$

$$2a^2 - a - 9 = \cancel{-4a}$$

$$2a^2 + \frac{+4a}{3a} - 9 = 0 \quad \frac{+5a}{3a}$$

$$(2a - 3)(a + 3) = 0$$

$$a = 3/2, -3$$

How do you feel about factoring quadratics? 1-4?

