

B-2-B HW_3

Monday, April 27, 2015

Multiply

- $(x-3)(x+4)$
 $x^2 + x - 12$
- $(3x+6)(2x+3)$
 $6x^2 + 21x + 18$
- $(4x-3)(2x-7)$
 $6x^2 + 10x + 21$

Factor

- $x^2 - 4x - 12$
 $(x-6)(x+2)$
- $x^2 - 8x + 15$
 $(x-5)(x-3)$
- $x^2 + 12x + 35$
 $(x+7)(x+5)$

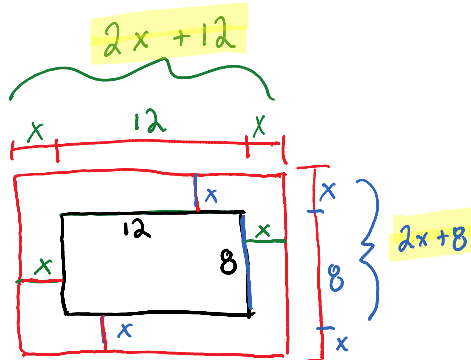
Factor Completely

- $2x^2 + 14x - 16$
 $2(x+8)(x-1)$
- $6x^2 - 33x + 15$
 $3(2x-1)(x-5)$
- $-16x^2 + 80x - 96$
 $-16(x-3)(x-2)$
- $2x^3 - 2x^2 - 40x$
 $2x(x-5)(x+4)$

Solve

- $x^2 + 3x + 2 = 0$
 $(x+2)(x+1) = 0$
 $x = -2 \text{ or } x = -1$
- $x^2 - 9x - 2 = 8$
 $x^2 - 9x - 10 = 0$
 $(x+1)(x-10) = 0$
 $x = -1 \text{ or } x = 10$
- $2x^2 - 4x = 0$
 $2x(x-2) = 0$
 $x = 0 \text{ or } x = 2$
- $3x^2 - 12 = 15$
 $3x^2 = 27$
 $x^2 = 9$
 $\sqrt{x^2} = \pm\sqrt{9}$
 $x = 3 \text{ or } x = -3$

15. **Walkway Problem:** A rectangular pool has a length of 12 feet and a width of 8 feet. A walkway of uniform width of x feet is to be built around the outside of the pool. Once the walkway is built, the pool area (including the walkway) will be 320 ft^2 . In feet, what is the width of the walkway?



$$A = l \cdot w$$

$$320 = (2x+12)(2x+8)$$

$$320 = 4x^2 + 40x + 96$$

$$-320 \quad -96$$

$$0 = 4x^2 + 40x - 224$$

$$0 = 4(x^2 + 10x - 56)$$

$$0 = 4(x+14)(x-4)$$

$x = -14 \text{ or } x = 4$

The width of the walkway is 4 feet wide