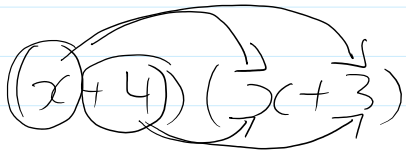


# Multiplying + Factoring

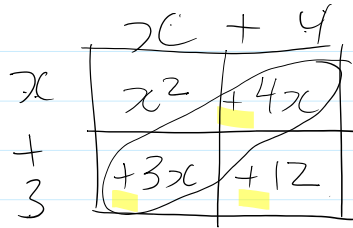
Tuesday, October 22, 2019 10:16 AM

$$(x+4)(x+3)$$



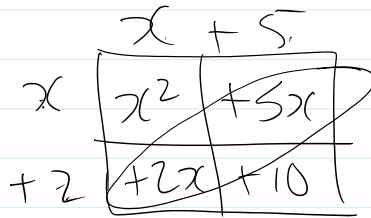
$$x^2 + 3x + 4x + 12$$

$$x^2 + 7x + 12$$



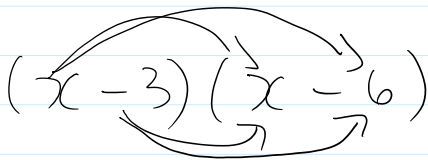
$$x^2 + 7x + 12$$

$$(x+2)(x+5)$$



$$x^2 + 7x + 10$$

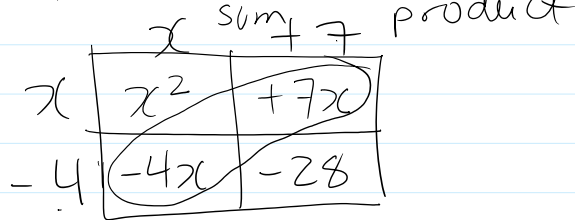
sum
product  
 $2+5$ 
 $2 \times 5$



$$= x^2 - 6x - 3x + 18$$

$$= x^2 - 9x + 18$$

$$(x-4)(x+7)$$



$$x^2 + 3x - 28$$

sum
product

Factor  $x^2 + 9x + 20 = (x+4)(x+5)$

sum
product

$$x^2 - 10x + 24 = (x-6)(x-4)$$

$$-6 + 10$$

$$+4$$

$$(x-4)(x-6)$$

$$x^2 + 2x - 15 = (x+5)(x-3)$$

difference

Try Factor ①  $x^2 - 7x + 12 = (x-4)(x-3)$

$$\textcircled{2} \quad x^2 + 10x + 21 = (x+7)(x+3)$$

$$\textcircled{3} \quad x^2 - 2x - 35 = (x+5)(x-7)$$

-7 5

$$x^2 + 11x + 18 \quad \begin{array}{cc} 1 & 18 \\ \hline 2 & 9 \\ 3 & 6 \end{array}$$

$$\text{ba) } x^2 - 2x - 15 = (x+3)(x-5)$$

$-5 + 3 = -2$

Factor  $2x^2 + 4x - 48$

$$2(x^2 + 2x - 24)$$

$$2(x+6)(x-4)$$

### Quiz

$$\textcircled{1} \quad (-3w)(5w) = -15w^2$$

$$\textcircled{2} \quad \frac{-12x^2}{3x^2} = -4$$

$$\textcircled{3} \quad (-6c)(4c-2) = -24c^2 + 12c$$

$$\textcircled{4} \quad \frac{-15p^2 - 12p}{-3p} = \frac{-15p^2}{-3p} - \frac{12p}{-3p} = 5p + 4$$

$$\textcircled{5} \quad (-5x)(2x^2 - 4x - 5) = -10x^3 + 20x^2 + 25x$$

$$\textcircled{6} \quad (7x^3 - 12x^2 + 20x) - (-2x^2 + 3x - 5)$$

$$\textcircled{6} \quad (8x^3 - 12x^2 + 20x - 4x) = -2x^2 + 3x - 5$$

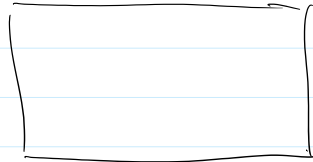
$$\textcircled{7} \quad \text{Factor } \frac{12x^3}{12x} - \frac{24x^2}{12x} + \frac{36x}{12x} \quad (CF = 12x)$$

$$12x(x^2 - 2x + 3)$$

$$\textcircled{8} \quad A = 40p^2 + 24p \quad w = 8p$$

$$A = l \cdot w$$

$$8p \cdot l = \frac{(40p^2 + 24p)}{8p}$$



$$\boxed{A=24} \cdot 4$$

$$l = 5p + 3$$

$$\text{Length } 5p + 3$$

$$5(4) + 3 = \textcircled{1}$$

$$20 + 3 = 23 \text{ m}$$

$$\text{Width } 8p = 8(4) = 32 \text{ m}$$

$$40(4)^2 + 24(4)$$

$$40(16) + 96$$

$$640 + 96 = 736 \text{ m}^2$$

$$\text{Area} = 23 \times 32 = 736 \text{ m}^2$$

①