

Trinomials with common factors

* Always look for a common factor
FIRST !!!

$$\begin{aligned} 3x^2 &: 3 \cdot x \cdot x \\ 15x &: 3 \cdot 5 \cdot x \\ 18 &: 2 \cdot 3 \cdot 3 \end{aligned}$$

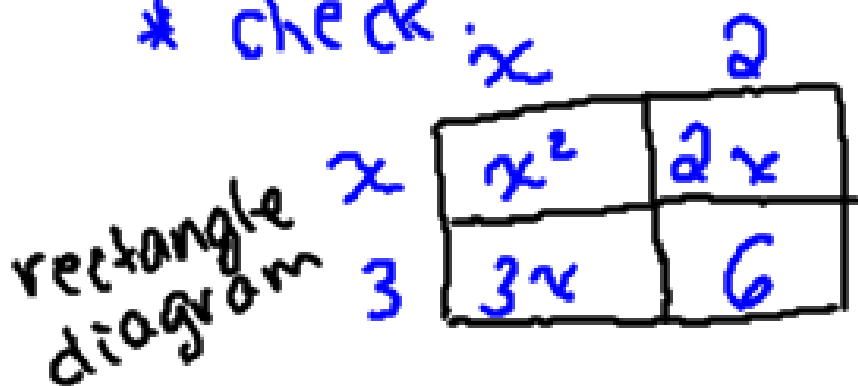
Factor. $3x^2 + 15x + 18$

$$3(x^2 + 5x + 6)$$

$$3(x+2)(x+3)$$

factors of 6
2 3

* check



$$3(x^2 + 2x + 3x + 6)$$

$$3(x^2 + 5x + 6)$$

$$3x^2 + 15x + 18$$



Factor $-2x^2 - 6x - 4$

factors of 2
1 2

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

$$-2(x+1)(x+2)$$

check...

$$(-2x - 2)(x + 2)$$

$$-2x(x+2) + (-2)(x+2)$$

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

$$-2x^2 - 6x - 4 \quad \checkmark$$

☺

Factor $3x^2 + 12x + 3$

$$3(x^2 + 4x + 1) \quad \checkmark$$

$$3x^2 + 12x + 3 \quad \checkmark$$

☺

Do p. 167 - #12-15, 19-21