

Factoring Trinomials $\rightarrow ax^2 + bx + c$

Factor: a) $x^2 + 10x + 16$
 \uparrow Sum of factors \nwarrow Product of factors

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

Ask: What factors of 16 add to 10?

<u>Factors</u>	<u>Sum</u>	
4 x 4	8	No
1 x 16	17	No
2 x 8	10	Yes!

$$\therefore (x+2)(x+8)$$

Check: $(x+2)(x+8)$
 (Foil) $x^2 + 10x + 16$ ✓

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

check
 $x \rightarrow 3 = 5x - 3x$
 $x + 5 = 2x$ ✓

c) $x^2 - 8x + 7$ *watch signs.
 $(x-1)(x-7)$

$x \rightarrow 1 = -7x - 1x$
 $x - 7 = -8x$ ✓

d) $2x^2 + 7x + 6$ [REDACTED]

e) $2y^2 - 7y - 15$

f) $6y^2 - 19y + 10$