

$$(2x+3)(x-4)$$

↓

$$F \rightarrow 2x \cdot x = 2x^2$$

$$O \rightarrow 2x \cdot -4 = -8x$$

$$I \rightarrow 3 \cdot x = 3x$$

$$L \rightarrow 3 \cdot -4 = -12$$

$$2x^2 - 5x - 12$$

$$y = x^2 - 12x - 28$$

$$(x - 14)(x + 2)$$

$-28 = -14$	$2 = -12$
-------------	-----------

$$-28 = 14 \quad -2 = 12$$

$$-28 = -7 \quad 4 = -3$$

$$7 \quad -4 = 3$$

$$-28 \quad 1 = -27$$

$$28 \quad -1 = 27$$

$$y = x^2 - 21x + 54$$

$$54 = 1 \cdot 54 = 54 \quad (x-18)(x-3)$$
$$-1 \cdot -54 = -54$$

$$6 \cdot 9 = 15$$

$$-6 \cdot -9 = -15$$

$$27 \cdot 2 = 29$$

$$-27 \cdot -2 = -29$$

$$18 \cdot 3 = 21$$

$$\boxed{-18 \cdot -3 = -21}$$

$$y = x^2 - 16x + 51$$

$$51 = 1 \quad 51 = 52$$

$$-1 \quad -51 = -52$$

$$3 \quad 17 = 20$$

$$-3 \quad -17 = -20$$

Can't be factored.

$$y = 2x^2 - 2x - 24$$

$$y = 2(x^2 - x - 12)$$

$$y = 2(x+3)(x-4)$$

$$x^2 - x - 12$$

$$-12 \Rightarrow -6 \quad 2 = -4$$

$$6 \quad -2 = 4$$

$$-1 \quad 12 = 11$$

$$1 \quad -12 = -11$$

$$-3 \quad 4 = 1$$

3	-4	$= -1$
-----	------	--------

Pg 260 # 24-34 even

FACTORING $x^2 + bx + c$ Factor the trinomial. If the trinomial cannot be factored, say so.

23. $x^2 + 5x + 4$

24. $x^2 + 9x + 14$

25. $x^2 + 13x + 40$

26. $x^2 - 4x + 3$

27. $x^2 - 8x + 12$

28. $x^2 - 16x + 51$

29. $a^2 + 3a - 10$

30. $b^2 + 6b - 27$

31. $c^2 + 2c - 80$

32. $p^2 - 5p - 6$

33. $q^2 - 7q - 10$

34. $r^2 - 14r - 72$