

$$1. \rightarrow x^2 + 2x - 48$$

No
#

$$(x-6)(x+8)$$

$$\begin{array}{r} -1 \times +48 \\ -2 \times 24 \\ -3 \times 16 \\ -4 \times 12 \\ -6 \times 8 \end{array}$$

$$\underline{-6} \times \underline{8} = \ominus 48$$

$$\underline{-6} + \underline{8} = \oplus 2$$

Diff
Big ⊕

Simple
Trinomial



$$2. \quad x^2 - 15x + 36$$

$$(x-3)(x-12)$$

$$\begin{array}{r}
 + \quad x - 36 \\
 - \quad 2 \quad x - 18 \\
 \hline
 - \quad 3 \quad x - 12
 \end{array}
 \quad
 \begin{array}{r}
 - \quad 3 \quad x - 12 = 36 \\
 \hline
 - \quad 3 + -12 = -15
 \end{array}$$

↑ Same
 ↓ Both ⊖



$$X^2 + 5x - 36$$

$$a^2 + 5a - 36$$

$$(x-4)(x+9)$$

$$(a-4)(a+9)$$

$$-1 \quad x + 36$$

$$-2 \quad x + 18$$

$$-3 \quad x + 12$$

$$4 \quad x + 9$$

$$\begin{array}{r} \text{Diff} \\ \uparrow \\ \text{---} x \text{---} = \ominus 36 \\ \text{---} + \text{---} = \oplus 5 \\ \downarrow \\ \text{Big } \oplus \end{array}$$

$$3. \quad 2x^2 + 10x - 48$$

$$2(x^2 + 5x - 24)$$

$$= 2(x-3)(x+8)$$

-1×24
 -2×12
 -3×8

$-x \quad = \quad -24$
 $- \quad + \quad = \quad +5$

Diff
 Big



4. $3x^2 - 18x - 120$

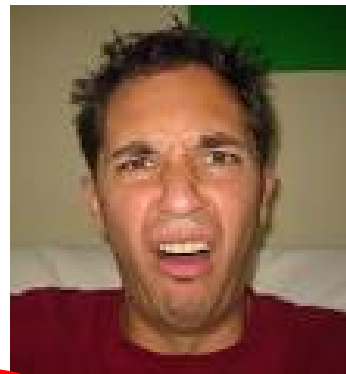


$$2x^2 + 7x + 3$$

$$\left(\frac{2x+1}{\cancel{2}}\right) \left(\frac{2x+6}{\cancel{2}}\right)$$

$$(x+1) (x+3)$$

$$= (2x+1) (x+3)$$



1 x 6

- x - = 6

+ - = 7

Both +

$$5x^2 + 34x - 7$$

$$\left(\frac{5x-1}{5}\right) \left(\frac{5x+35}{5}\right)$$

$$\left(x - \frac{1}{5}\right) (x + 7)$$

$$(5x - 1) (x + 7)$$

$$\begin{array}{l} _ x _ = \ominus 35 \\ _ + _ = \oplus 34 \\ -1 \times 35 \end{array}$$

Dif
Big \oplus