

$$ax^2 + bx + c$$

$$a =$$

We need to find the two factors of  $a \cdot c$  that sum to  $b$ .

$$6x^2 + 11x + 4$$

$$b =$$

We will use these factors to re-write the middle term of the trinomial.

$$c =$$

In this example our middle term is  $11x$ .

Re-writing the middle term with the found factors will give us four terms. Then we will factor by grouping.

$$ax^2 + bx + c$$

$$6x^2 + 11x + 4$$

$$6x^2 \quad \quad \quad +4$$

$$\underbrace{6x^2 + 3x} + \underbrace{8x + 4}$$

$$3x(2x+1) \quad ( \quad )$$

$a =$

$b =$

$c =$

$a \cdot c = 24$

$$\begin{array}{cc} & \swarrow \quad \searrow \\ 24 & 1 \end{array}$$

Sum

25

These are the factors we will use to re-write the middle term.

$$24x^2 + 53xy + 10y^2$$

$$24x^2 \quad \swarrow \searrow \quad +10y^2$$

$$\underbrace{24x^2 + 5xy} + \underbrace{48xy + 10y^2}$$

$$x ( \quad ) + ( \quad )$$

$a =$

$b =$

$c =$

$a \cdot c = 240$

		Sum
240	1	241
120	2	122