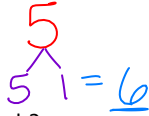
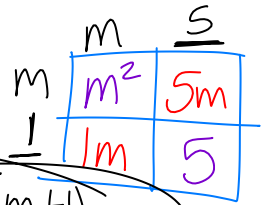


$m^2 + 6m + 5$ is a quadratic written in standard form ($ax^2 + bx + c$)

List out your factors for a x c:



Which factors of a x c combine to be your b?



$(m+5)(m+1)$

Let's try the following:

<p>1) $k^2 - 3k - 54$</p> <p>-54 $-9 \cdot 6$</p> <p>$X \quad X \quad 6$</p> <table border="1" style="display: inline-table;"> <tr> <td>X^2</td> <td>$6X$</td> </tr> <tr> <td>$-9X$</td> <td>-54</td> </tr> </table> <p>$(X-9)(X+6)$</p>	X^2	$6X$	$-9X$	-54	<p>2) $x^2 + 6x - 40$</p> <p>$(x+10)(x-4)$</p>	<p>3) $v^2 - 14v + 40$</p> <p>$(v-10)(v-4)$</p>
X^2	$6X$					
$-9X$	-54					
<p>4) $p^2 - 11p + 10$</p> <p>$(p-1)(p-10)$</p>	<p>5) $m^2 + 13m + 42$</p> <p>$(m+6)(m+7)$</p>	<p>6) $b^2 + 11b + 24$</p> <p>$(b+3)(b+8)$</p>				
<p>7) $x^2 - 2x - 24$</p> <p>$(x-6)(x+4)$</p>	<p>8) $k^2 - 13k + 30$</p> <p>$(k-10)(k-3)$</p>	<p>9) $v^2 + 10v + 16$</p> <p>$(v+8)(v+2)$</p>				

Now, let's try some where $a > 1$

10) $6x^2 + 5x + 1$

6
 $\begin{matrix} 2 & 3 \\ 1 & 6 \end{matrix}$

	$3x$	1
$2x$	$6x^2$	$2x$
1	$3x$	1

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

11) $3x^2 - 13x + 12$

36
 $\begin{matrix} -6 & -6 \\ -4 & -9 \end{matrix}$

	$3x$	-4
x	$3x^2$	$-4x$
-3	$-9x$	12

$(x-3)(3x-4)$

12) $4x^2 - 4x - 3$

-12
 $\begin{matrix} 2 & -3 \\ -6 & 2 \end{matrix}$

	$2x$	-3
$2x$	$4x^2$	$-6x$
1	$2x$	-3

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

13) $2x^2 + 23x + 30$

60
 $\begin{matrix} 20 & 3 \\ 3 & 10 \end{matrix}$

	x	10
$2x$	$2x^2$	$20x$
3	$3x$	30

$(2x+3)(x+10)$

14) $9x^2 - 6x - 8$

-72
 $\begin{matrix} -12 & 6 \end{matrix}$

	$3x$	-4
$3x$	$9x^2$	$-12x$
2	$6x$	-8

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

15) $10x^2 + 18x - 4$

-40
 $\begin{matrix} 20 & -2 \end{matrix}$

	$2x$	4
$5x$	$10x^2$	$20x$
-1	$-2x$	-4

$(5x-1)(2x+4)$
 $(10x-2)(x+2)$
 $2(5x-1)(x+2)$

$$\frac{3x^2}{3} - \frac{12x}{3} + \frac{9}{3}$$

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

$$3(x-1)(x-3)$$