

$$f(x) = 2x^2 - 4x - 6$$

standard to factored when $a \neq 1$

$a \cdot c = -12$	$b = -4$
$-1 \cdot 12$	$-1 + 12 = 11$
$-2 \cdot 6$	$-2 + 6 = 4$
$-3 \cdot 4$	$-3 + 4 = 1$
$-4 \cdot 3$	$-4 + 3 = -1$
$-6 \cdot 2$	$-6 + 2 = -4$
$-12 \cdot 1$	$-12 + 1 = -11$

backwards box

$$\begin{array}{cc} & (x + 1) \\ \begin{array}{c} 2x \\ -6 \end{array} & \begin{array}{|c|c|} \hline 2x^2 & 2x \\ \hline -6x & -6 \\ \hline \end{array} \end{array}$$

or

$$f(x) = 2(x-3)(x+1)$$
$$f(x) = (2x-6)(x+1)$$