

Factoring Quadratics

Factor $2x^2 + 9x - 5$

$a=2$ $b=9$ $c=-5$

$2x$ -1

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

1. Fill in the "x"
 ~~$a \cdot c$~~
 b

2. Fill in the box

ax^2	"x"
"x"	c

~~$a \cdot c$~~
 ~~-10~~
 10 -1
 ~~9~~

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

check: $2x^2 + 10x - 1x - 5$
 $2x^2 + 9x - 5$

Factor $25x^2 - 10x + 1$

	$5x$	-1
$5x$	$25x^2$	$-5x$
-1	$-5x$	1

$(5x-1)(5x-1)$
 $(5x-1)^2$

~~$\begin{array}{r} 25 \\ -5 \quad -5 \\ -10 \end{array}$~~ _____ = _____

Factor _____

~~_____~~ _____ = _____

Factor $2x^2 - 12x + 16$
 $2(x^2 - 6x + 8)$

x -4

x	x^2	$-4x$
-2	$-2x$	8

$2(x-4)(x-2)$

$\begin{array}{ccc} & 8 & \\ -4 & \times & -2 \\ & -6 & \end{array}$ _____ = _____

Factor _____

$\begin{array}{ccc} & & \\ & \times & \\ & & \end{array}$ _____