

d. $9x^2 - 29x + 6$ $a \cdot c = 9 \cdot 6$
 $\frac{54}{2}$
 $\frac{1 \cdot 54}{-2 \cdot 27}$
 $\frac{3 \cdot 18}{6 \cdot 9}$

$$\frac{9x^2 - 27x - 2x + 6}{9x(x-3) - 2(x-3)}$$

$$(x-3)(9x-2)$$

e. $15x^2 - x - 28$ $a \cdot c = -28 \cdot 15$
 -420
 $1 \cdot 420$
 $2 \cdot 210$
 $3 \cdot 140$
 $4 \cdot 105$
 $5 \cdot 84$
 $6 \cdot 70$
 $7 \cdot 60$
 $10 \cdot 42$
 $12 \cdot 35$
 $14 \cdot 30$
 $15 \cdot 28$
 $20 \cdot 21$

$$\frac{15x^2 - 21x + 20x - 28}{3x(5x-7) + 4(5x-7)}$$

$$(5x-7)(3x+4)$$

f. $x^2 - 4x - 21$ $\frac{-21}{1 \cdot 21}$
 $3 \cdot -7$

$$\frac{x^2 + 3x - 7x - 21}{x(x+3) - 7(x+3)}$$

$$(x+3)(x-7)$$

** Special Case*
If $a = 1$, once you find the two factors, $j+k$, $(x+j)(x+k)$

g. $x^2 + 14x + 48$ $1 \cdot 48$
 $2 \cdot 24$
 $3 \cdot 16$
 $4 \cdot 12$
 $6 \cdot 8$

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

h. $1x^2 + 7x - 30$ $1 \cdot 30$
 $2 \cdot 15$
 $-3 \cdot 10$
 $5 \cdot 6$

$$(x-3)(x+10)$$

i. $x^2 - 25$ $a \cdot c = -25$
 $\frac{1 \cdot 25}{-5 \cdot 5}$

$$\frac{x^2 + 0x - 25}{x^2 - 5x + 5x - 25}$$

$$x(x-5) + 5(x-5)$$

$$(x-5)(x+5)$$

j. $x^2 - 49$ ** Special Case*
 $a^2 - b^2 =$
 $(a+b)(a-b)$
Difference of Two Squares

$$(x+7)(x-7)$$

k. $4x^2 - 9$ ✓

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

l. $36x^2 - 49$

$$(6x+7)(6x-7)$$

m. $25x^2 + \underline{30x} + 9$ * Special Case

$(5x + 3)(5x + 3)$ $a^2 + 2ab + b^2$

$(5x + 3)^2$ $(a + b)^2$

Perfect Square Trinomial

n. $49x^2 - 126x + 81$

$(7x - 9)^2$