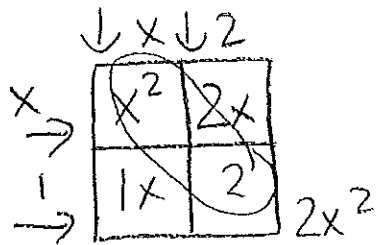


Name: KEY

# Factoring Practice! ☺

①  $2x^2 + 6x + 4$

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

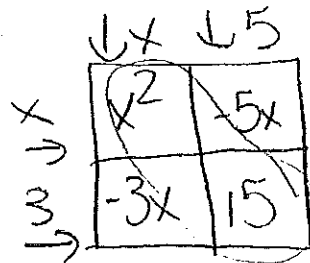


S	P	F
$3x$	$2x^2$	$2, 1$

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

④  $5x^2 - 40x + 75$

$5(x^2 - 8x + 15)$

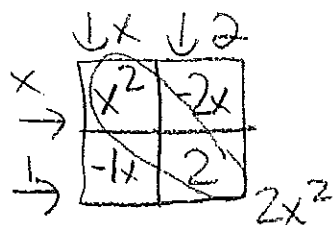


S	P	F
$-8x$	$15x^2$	$-5, -3$

$5(x-3)(x-5)$

②  $3x^2 - 9x + 6$

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

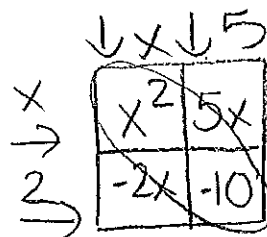


S	P	F
$-3x$	$2x^2$	$-2, -1$

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

⑤  $7x^2 + 21x - 70$

$7(x^2 + 3x - 10)$

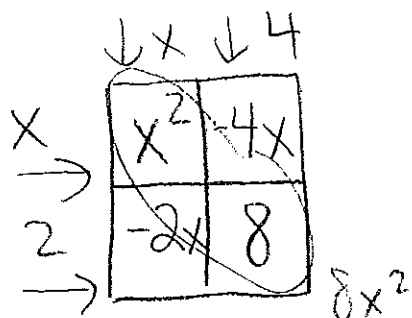


S	P	F
$3x$	$-10x^2$	$5, -2$

$7(x-2)(x+5)$

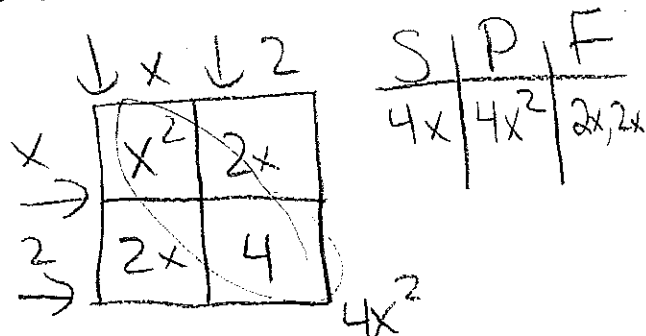
⑥  $3x^2 + 12x + 12$

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



S	P	F
$-6x$	$8x^2$	$-4, -2$

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



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

$$(7) 10x^2 - 40$$

Rewrite  $10x^2 + 0x - 40$

$$10(x^2 + 0x - 4)$$

	$\downarrow x$	$\downarrow 2$	
$x \rightarrow$	$x^2$	$2x$	
$2 \rightarrow$	$-2x$	$-4$	$-4x^2$

S	P	F
$0x$	$-4x^2$	$2, -2$

$$10(x-2)(x+2)$$

$$(9) 3x^2 - 24x + 48$$

$$3(x^2 - 8x + 16)$$

	$\downarrow x$	$\downarrow 4$	
$x \rightarrow$	$x^2$	$-4x$	
$4 \rightarrow$	$-4x$	$16$	$16x^2$

S	P	F
$-8x$	$16x^2$	$-4, -4$

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

$$(11) 12x + 16 + 2x^2$$

Rewrite:  $2x^2 + 12x + 16$

$$2(x^2 + 6x + 8)$$

	$\downarrow x$	$\downarrow 4$	
$x \rightarrow$	$x^2$	$4x$	
$2 \rightarrow$	$2x$	$8$	

S	P	F
$6x$	$8x^2$	$4, 2$

$$2(x+2)(x+4)$$

$$(8) 5x^2 - 80 \quad x^2 + 0x - 80$$

$$5(x^2 + 0x - 16)$$

	$\downarrow x$	$\downarrow 4$	
$x \rightarrow$	$x^2$	$4x$	
$4 \rightarrow$	$-4x$	$16$	

S	P	F
$0$	$16x^2$	$4, -4$

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

$$(10)$$

$$-20 + x^2 - 1x$$

Rewrite in standard form:

$$x^2 - 1x - 20$$

	$\downarrow x$	$\downarrow 5$	
$x \rightarrow$	$x^2$	$-5x$	
$4 \rightarrow$	$4x$	$-20$	

S	P	F
$-1x$	$-20x^2$	$-5, 4$

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

$$(12)$$

$$4x^2 + 8x + 4$$

$$4(x^2 + 2x + 1)$$

	$\downarrow x$	$\downarrow 1$	
$x \rightarrow$	$x^2$	$1x$	
$1 \rightarrow$	$1x$	$1$	$1x^2$

S	P	F
$2x$	$1x^2$	$1, 1$

$$4(x+1)(x+1)$$