

Place phones in holder and check homework.

Answers to Factoring Homework (ID: 1)

1)  $4kb(b+6)$

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

2)  $2v(p^2 - 7p - 14)$

6)  $(3u+2v)(3u-2v)$



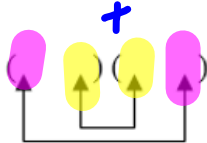
3)  $(7p^2 + 8)(3p - 1)$

4)  $(2n^2 - 7)(7n + 8)$

$$\begin{array}{l} 21p^3 - 7p^2 + 24p - 8 \\ \hline 7p^2(3p-1) + 8(3p-1) \\ (3p-1)(7p^2+8) \end{array}$$



**Factor  $x^2 - 7x + 12$**

General Steps	Examples
<p>1. Set up two empty sets of parenthesis below the polynomial.</p> <p>2. The first numbers must multiply together to equal the first term, <math>ax^2</math>.</p>  <p>3. The second numbers must multiply together to equal the last term <math>c</math>.</p>  <p>4. Multiply the outside terms and then the inside terms. When those terms are added together, they should equal the middle term, <math>b</math>.</p>  <p>5. Check your answer by multiplying the two binomials together.</p>	<p><math>x^2 - 7x + 12</math></p> <p><math>(x-3)(x-4)</math></p> <p><math>x^2 - 4x - 3x + 12</math></p>

Practice:

$$b^2 + 8b + 7$$

$$(b+7)(b+1)$$

$$b^2 + b + 7b + 7$$

$$b^2 + 16b + 64$$

$$(b+8)(b+8)$$

$$b^2 + 8b + 8b + 64$$

$$a^2 + 11a + 18$$

$$(a+9)(a+2)$$

$$a^2 + 2a + 9a + 18$$

$$p^2 + 11p + 10$$

$$(p+1)(p+10)$$

$$p^2 + 10p + 1p + 10$$

$$a^2 - a - 90$$

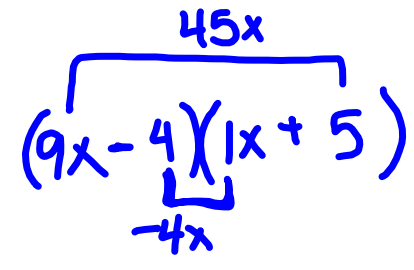
$$(a-10)(a+9)$$

$$a^2 - 9a + 10a - 90$$

$$b^2 - 6b + 8$$

$$(b-4)(b-2)$$

**Factor  $9x^2 + 41x - 20$**

General Steps	Examples
1. Set up two empty sets of <u>parenthesis</u> below the polynomial.	$9x^2 + 41x - 20$ 
2. The first numbers must multiply together to equal the first term, $ax^2$ .	
3. The second numbers must multiply together to equal the last term $c$ .	
4. Multiply the outside terms and then the inside terms. When those terms are added together, they should equal the middle term, $b$ .	
5. Check your answer by multiplying the two binomials together.	

Practice:

1.  $10x^2 + 27x + 14$

$$(10x+7)(x+2)$$

2.  $6x^2 - 11x - 30$

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

3.  $40x^2 + 188x + 168$

$$4(5x+6)(2x+7)$$

4.  $9x^2 + 58x + 24$

$$(9x+4)(x+6)$$

5.  $10x^2 + 61x + 6$

$$(x+6)(10x+1)$$

6.  $4x^2 + 31xy - 45y^2$

$$(4x-5y)(x+9y)$$