

Homework

Homework: Multiplying Polynomials

1)
$$(5x-8)(2x-3)$$
 2) $(n+1)(n-7)$
 $10x^2-31x+24$ x^2-6n-7

3) $(3x-7)(x-2)$ 4) $(3d-2)(-d^2-3d+2)$
 $3x^2-13x+14$ $-3x^3-7x^2+21-4$

5) $(x-2)(x+2)$ x^2-4

Example 1:
$$(x+3)(x-3)$$

$$x^2-3x+3x-9$$

$$x^2-9$$

Example 2:
$$(2x+4)(2x-4)$$

$$4x^2 - 8x + 8x - 16$$

$$4x^2 - 16$$

$$\sqrt{4x^2} = 2x$$

$$\sqrt{4x^2} = 2x$$

Example 3:
$$(7y-2)(7y+2)$$

 $49y^2 + 14y - 14y - 4$
 $49y^2 - 4$
 $49y^2 = 7y$

Example 4:
$$(3d = 2)(3d + 2)$$

$$-4 + 4d$$

$$-4 +$$

A problem like this
$$\underline{a}^2 - \underline{b}^2$$
 is called "the difference of perfect squares" and it factors as $(\underline{a} + \underline{b})(\underline{a} - \underline{b})$

$$\sqrt{16} = 4 \qquad |2|^2 - 100$$

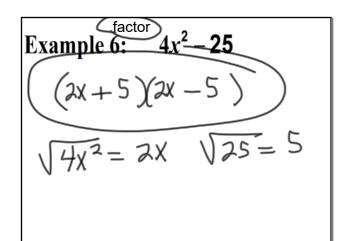
$$\sqrt{16} = 10$$

Example 5:
$$x^2 - 16$$

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

$$\sqrt{x^2} = x$$

$$\sqrt{16} = 4$$



Practice Work

Copy each problem and factor completely.

1)
$$9y^2 - 36$$

2)
$$49-x^2$$

2)
$$49-x^2$$

3) $16p^2-100$