

3-12-20

Factor the polynomial completely by GCF.

1. $7x^3 - 2x^2 + 5x$

2. $15x^4y^2 + 5x^3y - 20x$

Find the product of the binomial.

3. $(a + 6)^2$

4. $(5 - w)^2$

Factor the polynomial completely.

1. $7x^3 - 2x^2 + 5x$

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

2. $15x^4y^2 + 5x^3y - 20x$

$x(15x^3y^2 + 5x^2y - 20)$

$5x(3x^3y^2 + x^2y - 4)$

Find the product of the binomial.

3. $(a + 6)^2$

$a^2 + 12a + 36$

4. $(5 - w)^2$

$25 - 10w + w^2 \rightarrow w^2 - 10w + 25$

Factor the following difference of squares.

$$x^2 - 49$$

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

$$x^2 - 121$$

$$(x+11)(x-11)$$

$$16x^2 - 25$$

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

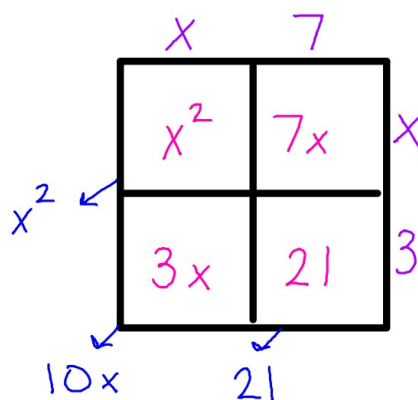
$$9x^2 - 25y^2$$

$$(3x+5y)(3x-5y)$$

Use a tabular model to find the product of $(x + 7)(x + 3)$

Standard form

$$ax^2 + bx + c$$



$$x^2 + 10x + 21$$

$$a:1 \quad b:10 \quad c:21$$

Find the product of $(2x + 1)(x + 4)$.

$$2x^2 + 8x + 1x + 4$$

$$\underline{2}x^2 + \underline{9}x + \underline{4}$$

$$a: 2 \quad b: 9 \quad c: 4$$

Factor the following quadratic expressions into a product of binomials. () ()

$$x^2 + 8x + 7$$

$$(x+1)(x+7)$$

$$a: 1$$

$$b: 8 \quad * \text{ add}$$

$$c: 7 \quad * \text{ multiply}$$

factors

$$1, 7$$

* if c-value is +
then both signs
must be same
+/+ or -/-

$$m^2 + m - 90$$

$$(m-9)(m+10)$$

$$a: 1$$

$$b: 1$$

$$c: -90$$

factors

$$\cancel{1, 90}$$

$$\cancel{2, 45}$$

$$\cancel{3, 30}$$

$$\cancel{5, 18}$$

$$\cancel{6, 15}$$

$$9, 10$$

* If c-value is -
then signs must
be opposite +/-
Then look @ b-value

$$k^2 - 13k + 40$$

$$a: 1$$

$$b: -13$$

$$c: 40$$

$$(k-5)(k-8)$$

~~$$1, 40$$~~

~~$$2, 20$$~~

~~$$4, 10$$~~

$$5, 8$$

$$x^2 + 99x - 100$$

$$a: 1$$

$$b: 99$$

$$c: -100$$

$$(x+100)(x-1)$$

$$1, 100$$

$$2, 50$$

$$4, 25$$

$$5, 20$$

$$10, 10$$

$$x^2 - 8x + 12$$

$$a: 1$$

$$b: -8$$

$$c: 12$$

$$(x-2)(x-6)$$

~~$$1, 12$$~~

$$2, 6$$

$$3, 4$$

$$x^2 - 4x - 21$$

$$a: 1$$

$$b: -4$$

$$c: -21$$

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

~~$$1, 21$$~~

$$3, 7$$