

MULTIPLICATION

() ()

DIVISION

(÷)

Simple Rules for Signs

OPPOSITE SIGNS:
 (-) (+) OR (+) (-)

* When opposite-signed numbers are multiplied or divided, the answer will be negative.

Example:

$$(-5)(2) = -10$$

We multiplied - 5 times + 2.

The signs are opposite, therefore,
the answer is negative.

SAME SIGNS:
 (-) (-) OR (+) (+)

* When same-signed numbers are multiplied or divided, the answer will be positive.

Example:

$$(-3)(-4) = 12$$

We multiplied - 3 times - 4.

The signs are the same, therefore,
the answer is positive.

Multiplication

OPPOSITE SIGNS

$$(+)(-) = (-)$$

$$(-)(+) = (-)$$

SAME SIGNS

$$(+)(+) = (+)$$

$$(-)(-) = (+)$$

Division

OPPOSITE SIGNS

$$\frac{(-)}{(+)} = (-)$$

SAME SIGNS

$$\frac{(-)}{(-)} = (+)$$

Note: Fractions are a form of division

Examples:

$$(2)(-8) = -16$$

$$(-4)(6) = -24$$

$$3x(-5) = -15x$$

$$-12y(4x) = -48xy$$

$$5z^2(-7) = -35z^2$$

$$-3(m+n) = -3m-3n$$

$$2s(-t-4) = -2st-8s$$

$$w(-3x^3-5w) = -3wx^3-5w^2$$

$$(-9)(-3) = 27$$

$$(10)(1) = 10$$

$$14x(2) = 28x$$

$$-y(-32) = 32y$$

$$2v(20w) = 40vw$$

$$-6r(-4s) = 24rs$$

$$-(-2p-q) = 2p+q$$

$$2(x^2+x+3) = 2x^2+2x+6$$

Examples:

$$\frac{2}{-2} = -1$$

$$\frac{-21}{3} = -7$$

$$\frac{8y}{-40} = -\frac{y}{5}$$

$$\frac{-6x^2}{6x} = -x$$

$$\frac{-5}{-10} = \frac{1}{2}$$

$$\frac{15}{5} = 3$$

$$\frac{-9x}{-x} = 9$$

$$\frac{-ab(c+1)}{-(c+1)} = ab$$