

# Multiplying Integers

# How does this work?

Remember, multiplication is **repeated** addition.

For example:  $2 \times 3 = 2 + 2 + 2$  (2, 3 times)

**OR**  $2 \times 3 = 3 + 3$  (3, 2 times)

Now, for negatives, it also works.

$$2 \times -3 = -3 + (-3) = -6$$

# Multiplying Integers

Basic Rules:  $+ \times + = +$

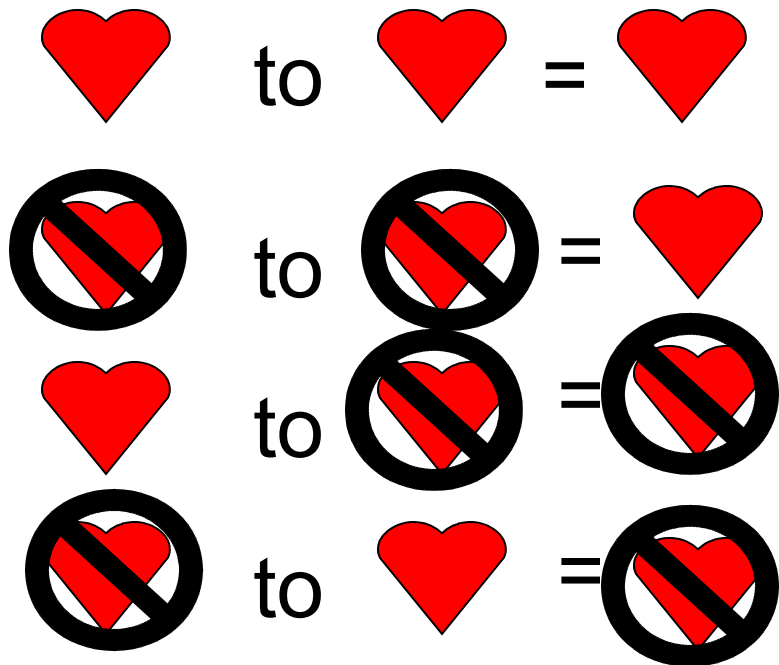
$- \times - = +$

$+ \times - = -$

$- \times + = -$

# Multiplying Integers

Another way to remember this is about love:



There are three symbols for multiplication in math. These are:

$$3 \times 2 = 3(2) = 3 \cdot 2 = (3)(2)$$

$$\text{Ex: } (-4)(5) = -20$$

$$(-2)(-3) = 6$$

$$(-10)(4) = -40$$

$$(-1)(-1) = 1$$

# On Whiteboards

$$(-3)(-5) = \square$$

$$(-2)(4) = \square$$

$$(4)(4) = \square$$

$$(2)(-8) = \square$$

# More than two factors

$$(-1)(-2)(-3) = -6$$

$$(-4)(-2)(-2)(-6) = 96$$

If you have an **even** number of negative factors, your answer will be **positive**.

If you have an **odd** number of negative factors, your answer will be **negative**.

# Whiteboards

Solve:

$$(-4)(-2)(-2) = \square$$

$$(-3)(4)(-2) = \square$$