



Evaluate each of the following expressions.

a.)  $-5 + 10$

b.)  $-12 + 15$

c.)  $-15 - 3$

d.)  $9 - (-2)$

e.)  $-13 - (-4)$

f.)  $-4(3)$

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**Multiplying Integers**

Rule: \_\_\_\_\_

Ex 1)

2)

3)

Rule: \_\_\_\_\_

Ex: 1)

2)

3)

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**Dividing Integers**

Ex: 1)

2)

3)

# Tic Tac Toe

+	-	-
-	+	-
-	-	+

Find the product or quotient.

a)  $25(-5)$

b)  $-9(-4)$

c)  $-24 \div 3$

d)  $-120 \div -8$

e)  $-240 \div 20 \div (-4)$

## Critical Thinking

- a) Analyze the table below. What can you say about the sign of the product of more than two integers?

Expression	Number of integers	Product	Sign of product
$-1(-2)$	?	?	?
$-1(-2)(-3)$	?	?	?
$-1(-2)(-3)(-4)$	?	?	?
$-1(-2)(-3)(-4)(-5)$	?	?	?

Conclusion: \_\_\_\_\_


For each question below, answer positive, negative, or zero.

- b) The product of two negative integers is \_\_\_\_\_.
- c) The absolute value of zero is \_\_\_\_\_.
- d) The sum of two integers that are opposites is \_\_\_\_\_.
- e) The sum of two negative integers is \_\_\_\_\_.
- f) The quotient of a positive integer and a negative integer is \_\_\_\_\_.

## Connections / Challenge

1) **Error analysis.** Describe and correct the error in multiplying -5 and -12, then dividing by -4.

2) What is the value of  $x^2$  if  $x = -2$ ?


$$\frac{-5(-12)}{-4} = \frac{-60}{-4} = 15$$

3) What about  $-x^2$ ?

### The **TAKEAWAY**

When multiplying or dividing integers, we must remember:

- **SAME SIGNS:** \_\_\_\_\_
- **DIFFERENT SIGNS:** \_\_\_\_\_