

# Multiplying and Dividing Integer Notes

## Rules

The product and quotient of two integers with the same sign is positive.  
pos x pos = positive; neg x neg = positive; same is true for division.

The product and quotient of two integers with different signs is negative.  
pos x neg = negative; neg x pos = negative; same is true for division.

If an answer contains numbers and variables, write the numbers first followed by the variables.

Find the product or quotient.

1)  $-4 (-12)$

48

2)  $-9 (11)$

-99

3)  $15 \div -3$

-5

4)  $\frac{-28}{-7}$

4

4

Simplify each expression.

5)  $-3(6y)$

$$-3 \cdot 6 \cdot y$$

$$-18y$$

6)  $-8a(-4b)$

$$-8 \cdot a \cdot -4 \cdot b$$

$$32ab$$

Evaluate each expression.

7) Evaluate  $-3xy$  if  $x = -4$  and  $y = 9$ .

$$\begin{aligned} & -3 \cdot -4 \cdot 9 \\ & 12 \cdot 9 \\ & 108 \end{aligned}$$

8) Evaluate  $\frac{-4x}{y}$  if  $x = -4$  and  $y = -8$ .

$$\frac{-4 \cdot -4}{-8} = \frac{16}{-8} = -2$$

9) Ramon has scores of 12, -18, 3, -7, 1, and -3 in his six rounds of a word game. Find the mean (average) of his scores.

$$\frac{12 + -18 + 3 + -7 + 1 + -3}{6}$$

$$\frac{-12}{6} = -2$$