

Math 060 WORKSHEET
1.7 Multiplication and Division of Real Numbers

NAME: _____

When adding or subtracting real numbers, you must be careful. Multiplication and division of real numbers is easier.

$5 \cdot 3 = 15$	$(-5) \cdot 3 = \underline{\quad}$
$5 \cdot 2 = 10$	$(-5) \cdot 2 = \underline{\quad}$
$5 \cdot 1 = 5$	$(-5) \cdot 1 = \underline{\quad}$
$5 \cdot 0 = 0$	$(-5) \cdot 0 = 0$
$5 \cdot (-1) = \underline{\quad}$	$(-5) \cdot (-1) = \underline{\quad}$
$5 \cdot (-2) = \underline{\quad}$	$(-5) \cdot (-2) = \underline{\quad}$
$5 \cdot (-3) = \underline{\quad}$	$(-5) \cdot (-3) = \underline{\quad}$

The product of a positive number and a negative number is _____

The product of a negative number and another negative number is _____

The old saying is that two negatives make a positive.
The same applies when dividing.

Fill in the blank: $a \cdot \underline{\quad} = 0$ for all a .

EXAMPLE: Find each product or quotient.

a.) $-1\frac{1}{8}\left(-\frac{3}{8}\right)$

b.) $(-2)(-2)(-2)$

c.) $3(-2)(0)(9)$

d.) $-0.03056(-1000)$

If a positive **times** a negative is a negative, is it true that a positive **plus** a negative is negative? _____

The multiplicative inverse of a number is found by inverting the number.

The multiplicative inverse of $\frac{4}{7}$ is $\frac{7}{4}$. The product of $\frac{4}{7}$ and $\frac{7}{4}$ is _____.

The multiplicative inverse of 200 is _____.

The multiplicative inverse of $-\frac{17}{10}$ is _____.

The Meaning of Division:

We think of division as the **opposite** of multiplication. When we divide, we multiply by the inverse of the divisor.

$$\frac{3}{4} \div \frac{5}{8} = \frac{3}{4} \cdot \underline{\quad}$$

$$= \underline{\quad}$$

$$\frac{320}{-20} = 320 \div (-20) = 320 \cdot \underline{\quad}$$

$$= \frac{320}{1} \cdot \frac{1}{-20} = \underline{\quad}$$