

Dividing Integers

When dividing integers, use the same rules as when you multiply integers:

$$\text{Positive} \div \text{Positive} = \text{Positive}$$

$$\text{Negative} \div \text{Negative} = \text{Positive}$$

$$\text{Negative} \div \text{Positive} = \text{Negative}$$

$$\text{Positive} \div \text{Negative} = \text{Negative}$$

Dividing Integers Examples

1.) $(-56) \div (-8) = 7$

2.) $84 \div (-7) = -12$

3.) $-72 \div (-12) = 6$

4.) $(-51) \div (-17) = 3$

5.) $98 \div (-14) = -7$

6.) $(-343) \div (-7) = 49$

7.) $(-96) \div 24 = -4$

8.) $450 \div (-45) = -10$

Evaluate each expression if $x = -6$ and $y = -3$.

9.) $12y \div x$

$$12(-3) \div -6$$

$$\checkmark$$

$$-36 \div -6$$

$$\textcircled{6}$$

10.) $\frac{-5x}{y} = \frac{-5(-6)}{-3}$

$$= \frac{30}{-3}$$

$$= \textcircled{-10}$$

Evaluate each expression if $x = -6$ and $y = -3$.

11.) $2y \div x$

$$2(-3) \div -6$$

$$\times$$

$$-6 \div -6$$

$$\textcircled{1}$$

12.) $3x \div (-y)$

$$3(-6) \div (-(-3))$$

$$3(-6) = -18$$

$$\checkmark$$

$$-18 \div 3$$

$$\textcircled{-6}$$

Division is used in statistics to find the average, or MEAN, of a set of data.

To find the mean of a set of numbers and then divide by the number of items in the set.

13.) Linda has scores of $-3, -2, 1, \text{ and } 0$ during 4 rounds of golf. Find the mean and interpret the quotient.

$$-3 + -2 + 1 + 0 = -4$$

$$\frac{-4}{4} = -1$$

14.) The last four transactions Jesse posted in her checkbook were $-\$35, \$23, -\$156, \text{ and } \60 . Find the mean and interpret the quotient.

$$-35 + 23 + -156 + 60$$

$$\begin{array}{r} \checkmark \\ -12 + -156 \end{array}$$

$$\begin{array}{r} \checkmark \\ -168 + 60 \\ \checkmark \\ -108 \end{array}$$

$$\begin{array}{r} 27 \\ 4 \overline{) 108} \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

$$\frac{-108}{4} = -27$$

