

Lesson 5 Reteach

Dividing Integers

Divide Integers with Different Signs

The quotient of two integers with different signs is negative.

Example 1 Find each quotient.

a. $36 \div (-4)$ The signs are different.
 $36 \div (-4) = -9$ The quotient is negative.

b. $-\frac{42}{6}$ The signs are different.
 $-\frac{42}{6} = -7$ The quotient is negative.

Divide Integers with the Same Sign

The quotient of two integers with the same sign is positive.

Example 2 Find each quotient.

a. $14 \div 2$ The signs are the same.
 $14 \div 2 = 7$ The quotient is positive.

b. $\frac{-25}{-5}$
 $\frac{-25}{-5} = -25 \div (-5)$ The signs are the same.
 $= 5$ The quotient is positive.

To find the **mean**, or average, of a set of numbers, find the sum of the numbers and then divide by the number of items in the set.

Example 3 The diving depths in feet of 7 scuba divers studying schools of fish were -12 , -9 , -15 , -8 , -20 , -17 , and -10 . Find the mean diving depth.

$$\frac{-12 + (-9) + (-15) + (-8) + (-20) + (-17) + (-10)}{7} = \frac{-91}{7}$$

Find the sum of the diving depths.
Divide by the number of divers.

$$= -13$$

Simplify.

The mean diving depth is -13 feet, or 13 feet below sea level.

Exercises

Find each quotient.

1. $40 \div (-5)$

2. $-18 \div (-2)$

3. $-24 \div 6$

4. $\frac{-28}{2}$

5. $\frac{36}{-4}$

6. $\frac{-150}{-25}$

7. The low temperatures in degrees Fahrenheit for a week were -3 , 5 , -9 , 2 , 6 , -11 , and -4 . Find the mean temperature.

8. During 5 rounds of golf, James had scores of 2 , -1 , 0 , -2 , and -4 . Find the mean of his golf scores.