

Understanding Division of Integers - Step-by-Step Lesson

Lesson 1 Integer Problems:

Solve following problems:

a. $-35 \div -7 =$

b. Clark needs to add $\frac{1}{2}$ of a cup of sugar to her cookie dough. He only has a $\frac{1}{4}$ -cup measure. How many scoops of sugar does Clark need to add?



Explanation:

a) There are certain rules for dividing integers.

Rule 1: The quotient of a positive integer and a negative integer or vice versa is a negative integer.

Rule 2: The quotient of two negative integers or two positive integers is a positive integer.

$$-35 \div -7$$

First, ignore any negatives and divide: $35 \div 7 = 5$

Now find the sign of the result. Since we divided a negative number, -35 , by a negative number, -7 , the result should be positive: 5 .

b) We have to find out how many $\frac{1}{4}$ cups of sugar are needed to make $\frac{1}{2}$ cup of sugar. So divide $\frac{1}{4}$ from $\frac{1}{2}$

$$\frac{1}{2} \div \frac{1}{4}$$

Turn this from a division problem into a multiplication problem by multiplying by the reciprocal.

$$\frac{1}{2} \div \frac{1}{4} = \frac{1}{2} \times \frac{4}{1} = 2$$

= 2 scoops

So 2 cups are required.

