

Lesson 6-11 • Group 2

Reinforce Understanding**6.11 Small Group • Group 2**

I can solve real-world problems by writing and solving fraction division equations, explain what each part stands for, and build one for a situation I have not seen before.

Worked model

Agent Torres has $\frac{2}{3}$ gallon of dust and each test uses $\frac{1}{6}$ gallon. I ask: how many tests fit?

1. The total $\frac{2}{3}$ is the dividend. The size of each test $\frac{1}{6}$ is the divisor. My equation is $\frac{2}{3} \div \frac{1}{6}$.
2. Keep $\frac{2}{3}$, change to $\times$, flip $\frac{1}{6}$ to $\frac{6}{1}$: $\frac{2}{3} \times \frac{6}{1} = \frac{12}{3} = 4$.
3. So she can run 4 tests. I check by multiplying back: $4 \times \frac{1}{6} = \frac{4}{6} = \frac{2}{3}$. It matches the total, so the answer is reasonable.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Solve each word problem by writing and solving an equation.

Complete the table. Show how you found each value.

Problem	Equation	Solution
A board is $\frac{7}{8}$ foot long. Each shelf bracket needs $\frac{1}{4}$ foot. How many brackets fit?		
A jug holds $\frac{5}{6}$ liter. Each cup holds $\frac{1}{3}$ liter. How many cups can be filled?		
A path is $\frac{3}{4}$ mile long. A runner does laps of $\frac{3}{8}$ mile. How many laps fit?		

Show your work

2. Sort: is the equation and solution CORRECT, or is there an error?

Write the name of the correct group on each line.

Groups: Correct Equation and Solution Incorrect Equation or Solution

- _____ A tank has $\frac{5}{6}$ gallon. Each bucket holds $\frac{1}{3}$ gallon. $\rightarrow \frac{5}{6} \div \frac{1}{3} = 2 \frac{1}{2}$ buckets
- _____ A pipe is $\frac{2}{3}$ foot long. Each piece is $\frac{1}{6}$ foot. $\rightarrow \frac{2}{3} \div \frac{1}{6} = 4$ pieces
- _____ A bag has $\frac{3}{4}$ lb. Each scoop is $\frac{1}{8}$ lb. $\rightarrow \frac{3}{4} \div \frac{1}{8} = 6$ scoops
- _____ A rope is $\frac{1}{2}$ yard. Each section is $\frac{1}{4}$ yard. $\rightarrow \frac{1}{4} \div \frac{1}{2} = \frac{1}{2}$ section
- _____ A jug has $\frac{4}{5}$ liter. Each cup is $\frac{2}{5}$ liter. $\rightarrow \frac{4}{5} \times \frac{2}{5} = \frac{8}{25}$ cups
- _____ A shelf is $\frac{7}{8}$ foot. Each book is $\frac{1}{4}$ foot. $\rightarrow \frac{7}{8} \div \frac{1}{4} = \frac{7}{32}$ books