

Solving Fraction Division Problems

Lesson 5-13

DATE _____

TIME _____



For Problems 1 and 2, write a number model using a letter for the unknown. Solve, showing your solution strategy with representations or drawings. Summarize your work with a division number model. Check your answer using multiplication and write a number sentence to show how you checked.

- 1 Two students equally share $\frac{1}{4}$ of a stick of clay. How much of the stick will each student get?

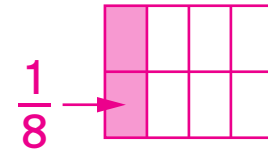
Number model: $\frac{1}{4} \div 2 = c$

Solution: Each student will get $\frac{1}{8}$ of the clay stick.

Summary number model: $\frac{1}{4} \div 2 = \frac{1}{8}$

Check using multiplication: $\frac{1}{8} * 2 = \frac{2}{8}$, or $\frac{1}{4}$

Sample work:



- 2 Three families equally share $\frac{1}{3}$ of a community garden space. How much of the community garden space does each family use?

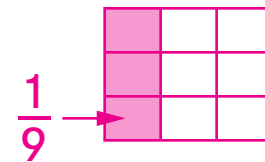
Number model: $\frac{1}{3} \div 3 = g$

Solution: Each family uses $\frac{1}{9}$ of the community garden space.

Summary number model: $\frac{1}{3} \div 3 = \frac{1}{9}$

Check using multiplication: $\frac{1}{9} * 3 = \frac{3}{9}$, or $\frac{1}{3}$

Sample work:



- 3 When you divide a fraction by a whole number greater than 1, is the quotient larger or smaller than the fraction? Explain.

Sample answer: The quotient is smaller than the fraction because you are dividing up the fraction into an equal number of smaller parts.

Try This

- 4 Write a number story for $\frac{1}{5} \div 2$. Solve your story. **Sample answer:** Max and his friend equally shared $\frac{1}{5}$ of a honeydew melon. How much melon did each person get? Each person got $\frac{1}{10}$ of the melon.