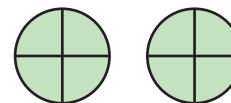


$2 \div \frac{1}{4}$ means "How many fourths are there in 2?"
The answer is 8.



Sometimes you will not be able to draw pictures to arrive at the answer.

The answer can be obtained by inverting the divisor and multiplying.

$$2 \div \frac{1}{4} = 2 \times \frac{4}{1} = \frac{2}{1} \times \frac{4}{1} = \frac{8}{1} = 8$$

Inverting the divisor and multiplying is not a new process for you.

$$8 \div 2 = 8 \times \frac{1}{2} = \frac{8}{1} \times \frac{1}{2} = \frac{8}{2} = 4$$

When you are working problems that involve division with fractions and you are not sure if you should invert the divisor or the dividend, refer back to a simple problem like the one above.

Also, as with whole numbers, any fraction or mixed number divided by itself is equal to one.

Lesson 129 2 of 7

Dividing fractions

① $5 \div \frac{1}{3} =$

② $2 \div \frac{1}{6} =$

Try example ① :
How many pieces will
you have if you divide a
5-foot board into pieces
that are one third of a
foot long?



Lesson 129 3 of 7

Dividing fractions

$$\textcircled{1} \quad 5 \div \frac{1}{3} = 5 \times \frac{3}{1} = \frac{5}{1} \times \frac{3}{1} = \frac{15}{1} = 15$$

$$\textcircled{2} \quad 2 \div \frac{1}{6} = 2 \times \frac{6}{1} = \frac{2}{1} \times \frac{6}{1} = \frac{12}{1} = 12$$

Try example $\textcircled{1}$:
How many pieces will you have if you divide a 5-foot board into pieces that are one third of a foot long?



Lesson 129 4 of 7

Dividing fractions

$$\textcircled{3} \quad \frac{3}{4} \div \frac{3}{8} =$$

$$\textcircled{4} \quad 4 \div \frac{2}{9} =$$

$$\textcircled{5} \quad \frac{3}{8} \div \frac{1}{5} =$$

Lesson 129 5 of 7

Dividing fractions

$$\textcircled{3} \quad \frac{3}{4} \div \frac{3}{8} = \frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{4}}} \times \frac{\overset{2}{\cancel{8}}}{\underset{1}{\cancel{3}}} = \frac{2}{1} = 2$$

$$\textcircled{4} \quad 4 \div \frac{2}{9} = 4 \times \frac{9}{2} = \frac{4}{1} \times \frac{9}{2} = \frac{36}{2} = 18$$

$$\textcircled{5} \quad \frac{3}{8} \div \frac{1}{5} = \frac{3}{8} \times \frac{5}{1} = \frac{15}{8} = 1\frac{7}{8}$$

Lesson 129 6 of 7

Dividing fractions

Create a story for this division problem. Solve the problem using your fraction pieces. Then write the answer.

$$\frac{5}{6} \div 3 =$$

If $\frac{5}{6}$ of a loaf of bread is shared equally by 3 people, how much of the loaf will each person be served?

$$\frac{5}{6} \div 3 = \frac{5}{6} \times \frac{1}{3} = \frac{5}{18} \text{ of the loaf}$$

Check your work by multiplying your answer $\frac{5}{18}$ times the divisor 3 .

$$\frac{5}{18} \times 3 = \frac{15}{18} = \frac{5}{6} \text{ Your answer should be the original dividend.}$$

Create a story problem for each of these division problems. Then solve the problems. First use your fraction pieces. Then write the answer. Finally, check your work.

⑥ $\frac{3}{9} \div 2 =$

Check:

⑦ $\frac{6}{8} \div 5 =$

Check:

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Lesson 129 7 of 7

Dividing fractions

Create a story for this division problem. Solve the problem using your fraction pieces. Then write the answer.

$$\frac{5}{6} \div 3 =$$

If $\frac{5}{6}$ of a loaf of bread is shared equally by 3 people, how much of the loaf will each person be served?

$$\frac{5}{6} \div 3 = \frac{5}{6} \times \frac{1}{3} = \frac{5}{18} \text{ of the loaf}$$

Check your work by multiplying your answer $\frac{5}{18}$ times the divisor 3 .

$$\frac{5}{18} \times 3 = \frac{15}{18} = \frac{5}{6} \text{ Your answer should be the original dividend.}$$

Create a story problem for each of these division problems. Then solve the problems. First use your fraction pieces. Then write the answer. Finally, check your work.

$$\textcircled{6} \quad \frac{3}{9} \div 2 = \frac{3}{9} = \frac{1}{3} \quad \frac{1}{3} \times \frac{1}{2} = \frac{1}{6} \quad \text{Check: } \frac{1}{6} \times 2 = \frac{2}{6} = \frac{1}{3} = \frac{3}{9}$$

$$\textcircled{7} \quad \frac{6}{8} \div 5 = \frac{6}{8} = \frac{3}{4} \quad \frac{3}{4} \times \frac{1}{5} = \frac{3}{20} \quad \text{Check: } \frac{3}{20} \times 5 = \frac{15}{20} = \frac{3}{4} = \frac{6}{8}$$

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