Unit 5, Lesson 25

Divide Decimals by Decimals

Let's divide decimals by decimals.

Warm-up

Number Talk: Same/Different

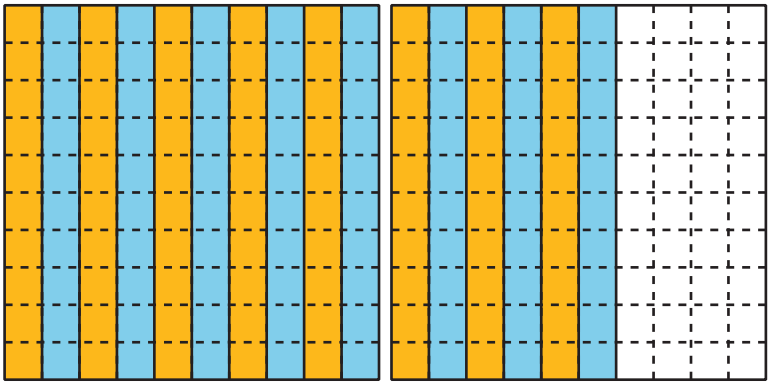
Find the value of each expression mentally.

- $20 \div 2$
- $2 \div 0.2$
- $50 \div 2$
- $5 \div 0.2$

Activity 1

Dividing by a Tenth and a Hundredth

1. Jada draws this diagram to find the value of $1.6 \div 0.1$.



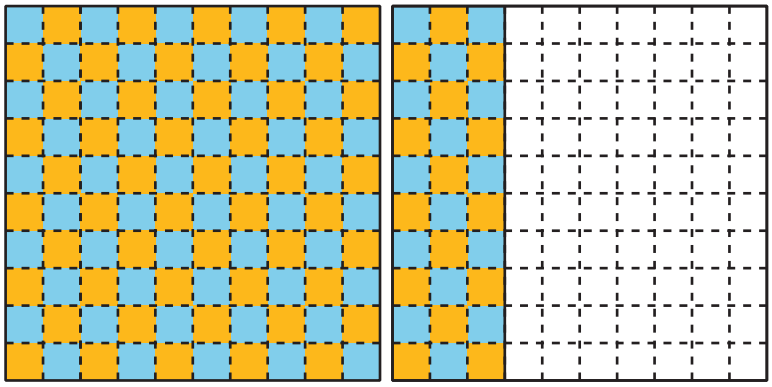
a. Describe how the diagram shows 1.6.

b. Describe how the diagram shows 16 groups of 1 tenth.

c. Describe how the diagram shows the value of $1.6 \div 0.1$.

d. Describe how the diagram also represents the expression $160 \div 10$.

2. a. Describe how this diagram represents $1.3 \div 0.01$.



b. What is the value of $1.3 \div 0.01$? Explain or show your reasoning.

Activity 2

Divide Decimals by Decimals

Find the value of each expression. Explain or show your reasoning.

1. $5 \div 0.1$

2. $5 \div 0.01$

3. $0.5 \div 0.1$

4. $0.5 \div 0.01$

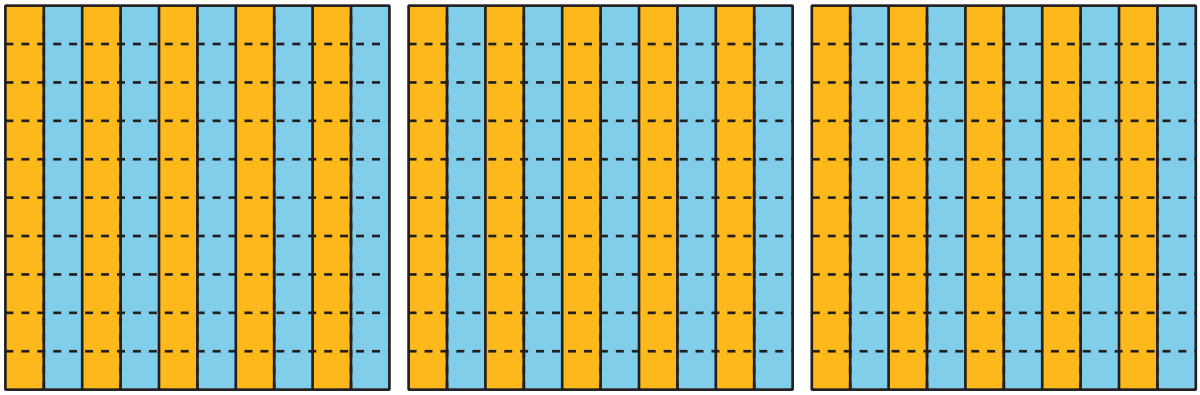
5. $0.02 \div 0.01$

6. $1.53 \div 0.01$

Section D Summary

We learned different strategies for dividing with decimals.

We used diagrams. This diagram shows there are 10 groups of 0.1 in each whole. So, there are 3×10 or 30 groups of 0.1 in 3 wholes.



We thought about place value. Since 3 is 30 tenths and 0.1 is 1 tenth, $3 \div 0.1$ is equivalent to $30 \div 1$. Both have the value 30.

We also used the relationship between multiplication and division. We know that $10 \times 0.1 = 1$. So, $3 \div 0.1 = 30$.