## Unit 5 Lesson 12: Dividing Decimals by Whole Numbers

### 1 Number Talk: Dividing by 4 (Warm up)

#### Student Task Statement

Find each quotient mentally.

$80÷4$

$12÷4$

$1.2÷4$

$81.2÷4$

### 2 Using Diagrams to Represent Division

#### Student Task Statement

To find $53.8÷4$ using diagrams, Elena began by representing 53.8.



She placed 1 ten into each group, unbundled the remaining 1 ten into 10 ones, and went on distributing the units.

This diagram shows Elena’s initial placement of the units and the unbundling of 1 ten.



1. Complete the diagram by continuing the division process. How would you use the available units to make 4 equal groups?
* As the units get placed into groups, show them accordingly and cross out those pieces from the bottom. If you unbundle a unit, draw the resulting pieces.
1. What value did you find for $53.8÷4$? Be prepared to explain your reasoning.
2. Use long division to find $53.8÷4$. Check your answer by multiplying it by the divisor 4.
3. Use long division to find $77.4÷5$. If you get stuck, you can draw diagrams or use another method.

### 3 Dividends and Divisors

#### Images for Launch



#### Student Task Statement

Analyze the dividends, divisors, and quotients in the calculations, and then answer the questions.



1. Complete each sentence. In the calculations shown:
	* Each dividend is \_\_\_\_\_\_ times the dividend to the left of it.
	* Each divisor is \_\_\_\_\_\_ times the divisor to the left of it.
	* Each quotient is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the quotient to the left of it.
2. Suppose we are writing a calculation to the right of $72,​000÷3,​000$. Which expression has a quotient of 24? Be prepared to explain your reasoning.
	1. $72,​000÷30,​000$
	2. $720,​000÷300,​000$
	3. $720,​000÷30,​000$
	4. $720,​000÷3,​000$
3. Suppose we are writing a calculation to the left of $72÷3$. Write an expression that would also give a quotient of 24. Be prepared to explain your reasoning.
4. Decide which of the following expressions would have the same value as $250÷10$. Be prepared to share your reasoning.
	1. $250÷0.1$
	2. $25÷1$
	3. $2.5÷1$
	4. $2.5÷0.1$
	5. $2,500÷100$
	6. $0.25÷0.01$



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