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Summer Edition

Fifth Grade
Math

Activity 2

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This packet includes four sections that cover some of the major content of 5th grade math. Each section includes notes and practice for each topic. For additional support, visit KCS TV on YouTube for instructional videos that accompany each section.

The following content is included in this packet:

	Topic			
	I. Classify Two-dimensional Figures	**II. Operations with Whole Numbers and Decimals**	**III. Operations with Fractions**	**IV. Relate Volume to Multiplication**
Activity 1	Identify Attributes of Two-dimensional Figures	Dividing Whole Numbers	Add & Subtract Fractions	Using Unit Cubes to Find Volume
Activity 2	Classifying Two-dimensional Figures	Multiplying Decimals	Multiplying Fractions	Using the Formula for Volume
Activity 3		Dividing Decimals		

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Objective: Perform operations (+, -, x, ÷) with whole numbers and decimals to hundredths or two decimal places.

Dividing Whole Numbers

Example

Find 1,386 ÷ 22.

To divide using partial quotients, estimate a number that can be multiplied by the divisor to get a product less than or equal to the dividend, and then subtract the product from the dividend. Repeat these steps until there is nothing left over.

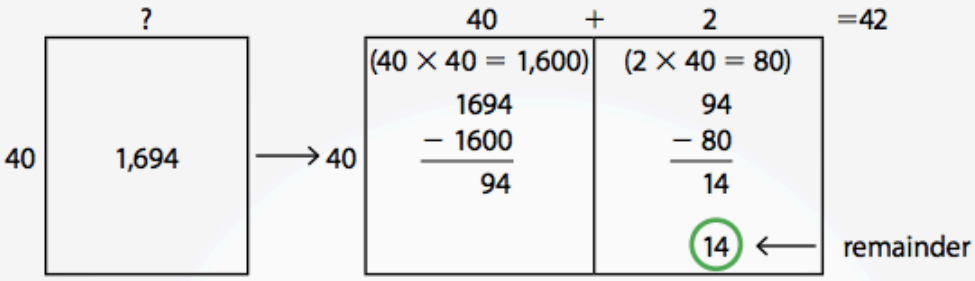
```
   63
    3
   60
22)1,386  → How many groups of 20 in 1,200? 60
 − 1,320  → 22 × 60
 ------
    66    → How many groups of 22 in 66? 3
  − 66    → 22 × 3
  ----
     0
```

1,386 ÷ 22 = 63

Example

Hillary makes 1,694 bracelets to sell at an annual crafts fair. She displays them in cases that each holds 40 bracelets. How many display cases can she fill? If she gives away the remaining bracelets, how many does she give away?

You can use an area model to divide.



The area model shows that 1,694 ÷ 40 is 42 with a remainder of 14.

She can fill 42 display cases. She gives away 14 bracelets.

Using Estimation and Area Models to Divide

Name: _____

Check each answer by multiplying the divisor by the quotient. If the answer is incorrect, cross out the answer and write the correct answer.

Division Problems	Student Answers	
516 ÷ 12	~~48~~ 43	Check: 12 × 48 = 576
837 ÷ 31	*27*	
351 ÷ 13	*57*	
918 ÷ 54	*22*	
896 ÷ 32	*23*	

Using Area Models and Partial Quotients to Divide

Name: _____

Estimate. Circle all the problems that will have quotients greater than 30. Then find the exact quotients of only the problems you circled.

1 540 ÷ 12 _____

2 798 ÷ 38 _____

3 429 ÷ 11 _____

4 931 ÷ 19 _____

5 925 ÷ 25 _____

6 390 ÷ 15 _____

Multiplying Decimals

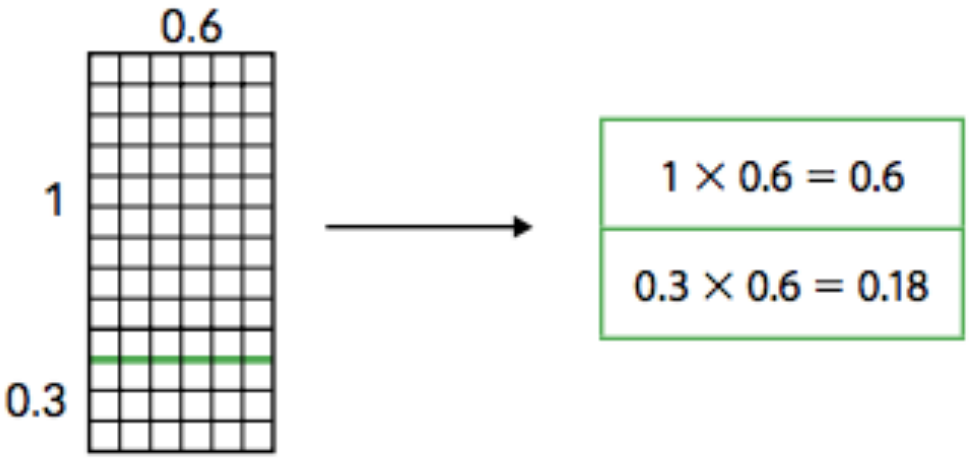
Example

$3.17 \times 4 = \boxed{?}$ Estimate: $3 \times 4 = 12$

$$
\begin{array}{rl}
 & 3.17 \\
\times & \quad 4 \\
\hline
 & \quad 28 \leftarrow 4 \text{ ones} \times 7 \text{ hundredths} = 28 \text{ hundredths} \\
 & \quad 40 \leftarrow 4 \text{ ones} \times 1 \text{ tenth} = 4 \text{ tenths} = 40 \text{ hundredths} \\
+ & 1{,}200 \leftarrow 4 \text{ ones} \times 3 \text{ ones} = 12 \text{ ones} = 1{,}200 \text{ hundredths} \\
\hline
 & 1{,}268 \text{ hundredths} = 12.68
\end{array}
$$

Example

Find 1.3×0.6.



$1.3 \times 0.6 = 0.6 + 0.18 = 0.78$

Multiplying a Decimal by a Whole Number

Name: _____

Multiply.

1. 3×0.2 _____
2. 3×0.03 _____
3. 3×0.23 _____
4. 4×0.08 _____
5. 4×1.1 _____
6. 4×1.18 _____
7. 6×0.07 _____
8. 6×1.1 _____
9. 6×1.17 _____

Multiplying Decimals Less Than 1

Name: _____

Multiply.

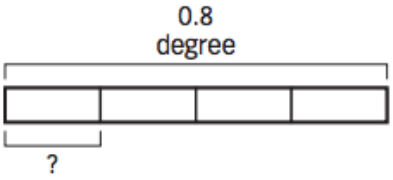
1. 0.5×3 _____
2. 0.5×0.3 _____
3. 0.5×0.03 _____
4. 6×0.2 _____
5. 0.6×0.2 _____
6. 0.06×0.2 _____
7. 0.8×0.1 _____
8. 0.8×0.2 _____
9. 0.8×0.3 _____

Dividing Decimals

Example

The temperature rose 0.8 degree in 4 hours. If the temperature rose by an equal amount each hour, how many degrees did it rise each hour?

You can represent this with a bar model.



To find $0.8 \div 4$, think $4 \times \boxed{?} = 0.8$.

$0.8 = 8$ tenths 4×2 tenths $= 8$ tenths
$4 \times 0.2 = 0.8$
$0.8 \div 4 = 0.2$

The temperature rose 0.2 degree each hour.

Example

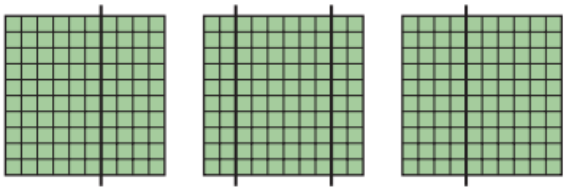
What is $3 \div 0.6$?

You can represent this problem with decimal grids.

Each large square represents 1 whole.

To find $3 \div 0.6$, think $0.6 \times ? = 3$.

The lines separate groups of 0.6.



$3 = 30$ tenths
$0.6 = 6$ tenths

In words: 6 tenths $\times$? $= 30$ tenths
6 tenths $\times 5 = 30$ tenths

$3 \div 0.6 = 5$

Example

$7 \div 0.25 = ?$

Identify the least place. Write each number to the least place.

$0.25 = 25$ hundredths
$7 = 700$ hundredths

700 hundredths $\div$ 25 hundredths $= 28$
$7 \div 0.25 = 28$

Divide as you would with whole numbers, using partial quotients or another method.

$$
\begin{array}{r}
28 \\
\hline
25\overline{)700} \\
-\ 500 \\
\hline
200 \\
-\ 200 \\
\hline
0
\end{array}
$$

Dividing a Decimal by a Whole Number

Name: _____

Multiply to check if the student's answer is reasonable. If not, cross out the answer and write the correct quotient.

Division Problems	Student Answers
0.88 ÷ 11	~~0.8~~ 0.08 Product: 11 × 0.8 = 8.8
5.6 ÷ 8	*0.07*
7.2 ÷ 9	*0.8*
25.35 ÷ 5	*5.7*
21.7 ÷ 7	*3.1*

Dividing by Hundredths

Name: _____

Divide.

1 ÷ 0.25	4 ÷ 0.25	1.8 ÷ 9
9 ÷ 2.25	96.16 ÷ 8	60.18 ÷ 2

Answer Key

II. Operations with Whole Numbers and Decimals

Activity 1: Dividing Whole Numbers

Use Estimation and Area Models to Divide	Use Area Models and Partial Quotients to Divide
516 ÷ 12= 43	540 ÷ 12= 45
837 ÷ 31= 27	798 ÷ 38= 21
351 ÷ 13= 27	429 ÷ 11= 39
918 ÷ 54= 17	931 ÷ 19= 49
896 ÷ 32= 28	925 ÷ 25= 37
	390 ÷ 15= 26

Activity 2: Multiplying Decimals

Multiplying a Decimal by a Whole Number	Multiplying Decimals Less Than 1
3 x 0.2= 0.6	0.5 x 3= 1.5
3 x 0.03= 0.09	0.5 x 0.3= 0.15
3 x 0.23= 0.69	0.5 x 0.03= 0.015
4 x 0.8= 3.2	6 x 0.2= 1.2
4 x 1.1= 4.4	0.6 x 0.2= 0.12
4 x 1.18= 4.72	0.06 x 0.2= 0.012
6 x 0.07= 0.42	0.8 x 0.1= 0.08
6 x 1.1= 6.6	0.8 x 0.2= 0.16
6 x 1.17= 7.02	0.8 x 0.3= 0.24

Activity 3: Dividing Decimals

Dividing a Decimal by a Whole Number	Dividing by Hundredths
0.88 ÷ 11= 0.08	1 ÷ 0.25= 4
5.6 ÷ 8= 0.7	4 ÷ 0.25= 16
7.2 ÷ 9= 0.8	1.8 ÷ 9= 0.2
25.35 ÷ 5= 5.07	9 ÷ 2.25= 4
21.7 ÷ 7= 3.1	96.16 ÷ 8= 12.02
	60.18 ÷ 2= 30.09