

End of Module 2 Assessment Study Guide

1. Write the missing divisor using a power of 10. Then show your reasoning using a place value chart.

a. $7.4 \div 10^2 = 0.074$

ones	tenths	hundredths	thousandths
7	4	$\div 10^2$	
	0	7	4

b. $1793 \div 10^3 = 1.793$

thousands	Hund.	Tens	ones	$\frac{1}{10}$	$\frac{1}{100}$
1	7	9	3		$\div 10^3$
			1	7	9

2. Estimate the quotient. Show all lines of your work. Explain your thinking in writing below.

a. $573 \div 82 = 6 \text{ R } 81$

estimate

solve

check

$560 \div 80 = 7$
 \uparrow
 80 is close to 82.
 The nearest multiple of 8 tens is 56 tens. $56 \text{ tens} \div 8 \text{ tens} = 7$

82	6
82	x 6
-492	492
81	+ 81
573 ✓	

b. $1,391 \div 698 = 1 \text{ R } 693$

estimate

solve

check

$1400 \div 700 = 2$
 \uparrow
 700 is close to 698. The nearest multiple of 7 hundreds is 14 hundreds.
 $14 \text{ hundreds} \div 7 \text{ hundreds} = 2$

698	1
698	x 1
-698	698
693 ✓	

3. Create and solve another division problem that has the SAME quotient and remainder as the two problems below. Explain in writing your strategy for creating the new problem.

31	4 R 14
31	x 4
-124	124
14	

16	4 R 14
16	x 4
-64	64
14	

create and solve a division problem with a quotient of 4 and a remainder of 14:

$15 \times 4 + 14 =$

15	4
15	x 4
-60	60
14	

whole

$60 + 14 = 74$

Explain your strategy: To check division, I can multiply the divisor and the quotient, then add the remainder. So I multiplied the quotient of 4 by a divisor greater than the remainder. Then added

the remainder to get my whole #

4. Jackson says that $33 \div 6$ equals $28 \div 5$ because both have quotients of 5 R3. Show his mistake using decimal division.

$$\begin{array}{r} 5.5 \\ 6 \overline{) 33.0} \\ \underline{-30} \downarrow \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

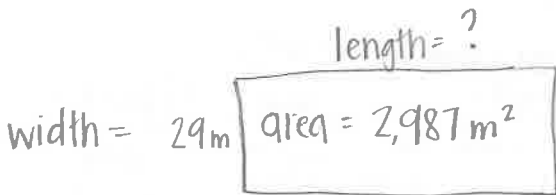
$$\begin{array}{r} 5.6 \\ 5 \overline{) 28.0} \\ \underline{-25} \downarrow \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

$$33 \div 6 = 5.5$$

$$28 \div 5 = 5.6$$

5. A rectangular playground has an area of 2987 square meters. If the width is 29 meters, what is the length?

Draw and label the playground. Solve. Check. Write your answer as a sentence.



$$\text{area} = \text{length} \times \text{width}$$

$$2987 = ? \times 29$$

$$\begin{array}{r} 103 \\ 29 \overline{) 2987} \\ \underline{-29} \downarrow \downarrow \\ 87 \\ \underline{-87} \\ 0 \end{array}$$

The length of the playground is 103 meters.

6. Show an estimate, solve, and check. Your answer WILL have a remainder.

$$342 \div 79 =$$

estimate

$$320 \div 80 = 4$$

solve

$$\begin{array}{r} 4 \text{ R } 26 \\ 79 \overline{) 342} \\ \underline{-316} \\ 26 \end{array}$$

check

$$\begin{array}{r} 79 \\ \times 4 \\ \hline 316 \\ + 26 \\ \hline 342 \checkmark \end{array}$$

7. Show an estimate, solve, and check. Your quotient will be a decimal number.

3.5 ÷ 50 =
estimate

35 tenths ÷ 5 tens = 7 _____ ?

Solve

$$\begin{array}{r} .07 \\ 50 \overline{) 3.50} \\ \underline{-350} \\ 0 \end{array}$$

check

$$\begin{array}{r} 50 \\ \times .07 \\ \hline 350 \end{array} \times 100 \times 7 = \begin{array}{r} 50 \\ \times 7 \\ \hline 350 \end{array} \div 100 = 3.5$$

8. Solve. For (b) and (c), explain your thinking.

a. $4.2 \div 6 = \underline{.7}$

$$\begin{array}{r} .7 \\ 6 \overline{) 4.2} \\ \underline{-42} \\ 0 \end{array}$$

b. $42 \div 6 = \underline{7}$ \longrightarrow 42 is 4.2×10 , so $.7 \times 10 = 7$

c. $4.2 \div 60 = \underline{.07}$ \longrightarrow 60 is ten times greater than 6. We are dividing by 60, so $.7 \div 10 = .07$

9. Amelia's Best Bakery uses 6.5 pounds of flour daily. How many ounces of flour will Amelia use in 2 weeks? (1 lb = 16 ounces). Show your work step-by-step. Label all parts of your work. Write your answer in a sentence.

$$\begin{array}{r} 6.5 \times 10 \rightarrow 65 \\ \times 16 \\ \hline 1040 \end{array}$$

$$\begin{array}{r} 65 \\ \times 16 \\ \hline 390 \\ + 650 \\ \hline 1040 \end{array} \div 10 = 104.0$$

Step 1: I multiplied 6.5 lbs by 16 to convert pounds to ounces.

Step 2: I multiplied the daily ounces by 14 to find how many ounces were used in 2 weeks.

$$\begin{array}{r} 104 \\ \times 14 \\ \hline 416 \\ + 1040 \\ \hline 1,456 \end{array}$$

1,456 ounces of flour are used in two weeks

10. At Amelia's Best Bakery, a recipe of bread calls for 13 ounces of flour. If Amelia uses all of the flour (from the answer to #9) to make loaves of bread, how many full loaves of bread can she make in 2 weeks?

Draw a picture. Solve. Label your work. Write your answer in a sentence.

$$\begin{array}{r}
 112 \\
 13 \overline{)1456} \\
 \underline{-13} \\
 15 \\
 \underline{-13} \\
 26 \\
 \underline{-26} \\
 0
 \end{array}$$

I divided the total amount of flour by 13 to see how many loaves of bread she could make.

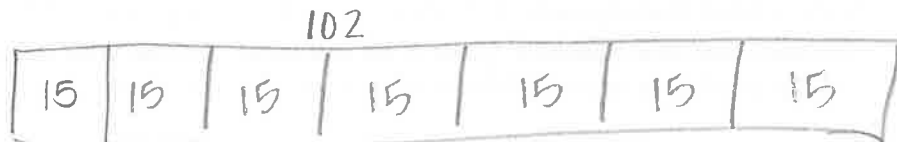
She can make 112 loaves of bread in two weeks

11. Lindsey's Cake-o-rama Shop is famous for making cakes. Lindsey sends 102 cakes to one grocery store. She can pack up to 15 cakes in one box for shipping. How many boxes will Lindsey need to ship all 102 cakes?

Draw a picture. Solve. Label your work. Write your answer in a sentence.

$$\begin{array}{r}
 6 \text{ R } 12 \\
 15 \overline{)102} \\
 \underline{-90} \\
 12
 \end{array}$$

She will need 7 boxes to ship all of her cakes.



12. Andrew's Donuts Deluxe shop pays \$.70 per pound of sugar and \$1.50 per pound of butter. **Write an expression** that shows how much Andrew will spend if he buys 8 pounds of sugar and 9 pounds of butter. Then solve the expression.

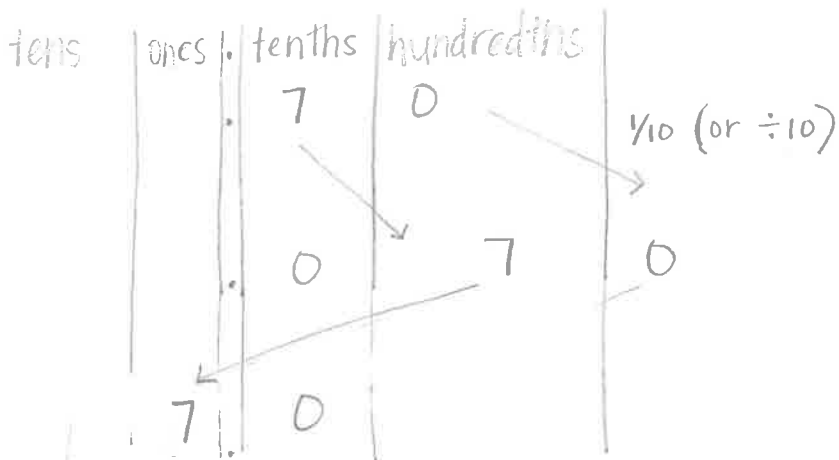
butter

$$(8 \times .70) + (9 \times 1.50)$$

↓

$$5.60 + 13.50 = \$19.10$$

13. Andrew pays \$.70 for 1 pound of sugar for his donut shop. One pound of colored sprinkles costs $\frac{1}{10}$ as much as one pound of sugar. Andrew needs 100 pounds of sprinkles. How much will Andrew spend on sprinkles? Show your work on a place value chart. Write your answer in a sentence.



\$7.00 for 100 lbs
of sprinkles.

Explain with words what happened to the placement of the decimal as you completed your work.

