NAME DATE TIME Lesson 2-14

Unit 2 Self Assessment

Think about each skill listed below. Assess your own progress by checking the most appropriate box.

Skills	I can do this on my own and explain how to do it.	I can do this on my own.	I can do this if I get help or look at an example.
① Identify values of digits in a multidigit number. MJ1 38			
② Write numbers in expanded form. MJ1 37			
③ Represent powers of 10 in exponential notation. MJ1 41			
④ Explain patterns when multiplying by a power of 10. MJ1 50			
⑤ Multiply with U.S. traditional multiplication. MJ1 54			
⑥ Divide multidigit numbers. MJ1 65			
⑦ Interpret a remainder in a division problem. MJ1 68–69			

NAME DATE TIME Lesson 2-14

Unit 2 Assessment

Solve the following number riddles.

1. I am a 5-digit number.
   My 3 is worth 3 * 10,000.
   My 4 is worth 4,000.
   One of my 2s is worth 20. The other 2 is worth 10 times as much.
   My other digit is 7.

   What number am I? _____

2. I am a 6-digit number.
   One of my 7s is worth 700,000. The other 7 is worth $\frac{1}{10}$ as much.
   My 8 is worth 8 [100s].
   My 9 is worth 90.
   My other digits are 0.

   What number am I? _____

3. **a.** Jesse collects cans for recycling. When he has 1,500 cans, the recycling center will pick them up from his house. Jesse has 120 bags with about 35 cans in each bag. Should he call the recycling center to arrange a pick-up? Explain how you know.

   b. Did you have to find an exact answer to solve Problem 3a? Explain why or why not.

NAME DATE TIME Lesson 2-14

Unit 2 Assessment (continued)

④ Complete the table.

Standard Notation	Products of 10s	Exponential Notation
1,000		
	10 * 10 * 10 * 10 * 10	
100		
		10^6

⑤ **a.** Jamella and Ilyssa were playing *High-Number Toss*. They created the numbers shown below. Write each player's number in standard notation. Circle the player who won the round.

Jamella: $624 * 10^4$ Standard notation: _____

Ilyssa: $155 * 10^5$ Standard notation: _____

b. Explain how you wrote each number in standard notation.

_____

_____

⑥ Write the number 2,574,068 in expanded form.

_____

_____

⑦ Convert pounds to ounces to complete the table.

pounds	ounces
1	16
2	
5	
8	
10	

NAME DATE TIME Lesson 2-14

Unit 2 Assessment (continued)

(8) Write an expression with grouping symbols to model the number story. Then solve.

Allen is shipping a gift to his cousin. The gift weighs 4 pounds. The box and shipping materials weigh 9 ounces. What is the total weight of the package in ounces?

Number model: _____

Answer: _____ ounces

(9) Create a mathematical model for the problem. Then solve the problem and show your work. Explain how you decided what to do with the remainder.

Jamie is helping out in the school library. He needs to figure out how many shelves the library staff should order for a new reading corner. There are 378 books for the reading corner. Each shelf holds 50 books. The librarian wants to put all the books on shelves. How many shelves should the library order?

Quotient: _____ Remainder: _____

What does the remainder represent?

_____

Answer: The library should order _____ shelves.

Circle what you did with the remainder: Ignored it Rounded the quotient up

Why? _____

_____

_____

NAME DATE TIME Lesson 2-14

Unit 2 Assessment (continued)

Make an estimate for each problem. Then solve. Use U.S. traditional multiplication for Problems 10 and 11. Use your estimate to check whether your answer makes sense.

10 364 * 9 = ?

Estimate: _____

```
  3 6 4
*     9
-------
```

11 48 * 13 = ?

Estimate: _____

```
    4 8
*   1 3
-------
```

12 806 ÷ 4 → ?

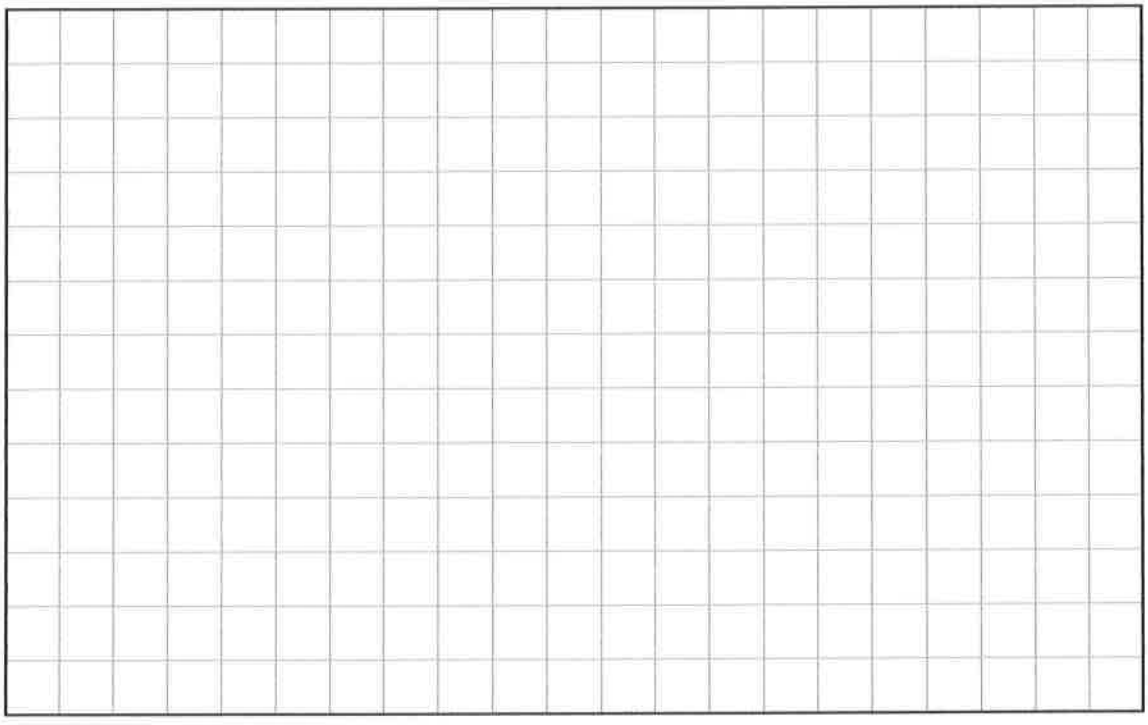
Estimate: _____

806 ÷ 4 → _____ R _____

13 962 ÷ 25 → ?

Estimate: _____

962 ÷ 25 → _____ R _____



NAME DATE TIME **Lesson 2-14**

Unit 2 Challenge

① **a.** Use the following expressions to complete the statements below.

$6 * 10^8$ $68 * 10^3$ $16 * 10^5$ $5 * 10^7$

In 1 year Earth travels about _____ miles in its orbit around the Sun.

In 1 month Earth travels about _____ miles.

In 1 day Earth travels about _____ miles.

In 1 hour Earth travels about _____ miles.

b. Evaluate each of the expressions.

$6 * 10^8 =$ _____

$68 * 10^3 =$ _____

$16 * 10^5 =$ _____

$5 * 10^7 =$ _____

c. Do your answers to Part a make sense? How do you know?

_____

_____

_____

② Sally and Paul solved the same multiplication problem. Sally used U.S. traditional multiplication. Paul used a different strategy.

Sally	**Paul**
$101 * 26 = ?$	$101 * 26 = ?$
$\begin{array}{r} 1\ 0\ 1 \\ *\ \ 2\ 6 \\ \hline 6\ 0\ 6 \\ +2,\ 0\ 2\ 0 \\ \hline 2,\ 6\ 2\ 6 \end{array}$	$100 * 26 = 2{,}600$ $1 * 26 = 26$ $2{,}600 + 26 = 2{,}626$

Which strategy seems more efficient? Why?

_____

_____

_____

NAME DATE TIME **Lesson 2-14**

Unit 2 Challenge (continued)

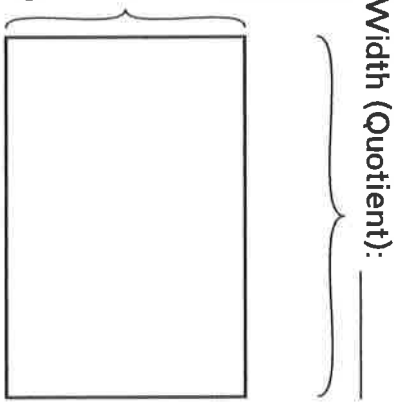
③ Solve the following problem in two different ways using partial-quotients division. Complete an area model to show each solution.

1,440 ÷ 60 = ?

60)1, 4 4 0

Area (Dividend): _____

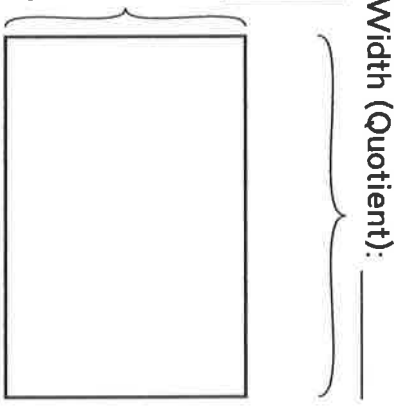
Length (Divisor): _____



60)1, 4 4 0

Area (Dividend): _____

Length (Divisor): _____



④ Write an expression with grouping symbols to model the problem. Then solve.

The dimensions of a room are 8 yards by 9 yards. Carpet costs $6 per square foot. How much would it cost to buy carpet for the room?

Number model: _____

Answer: $_____