

Unit 9 Assessment

- ① For each number sentence, fill in the blank with a factor from 1 to 10 to make it true.

a. $5 \times 7 < 7 \times$ _____

b. $4 \times 3 > 4 \times$ _____

c. $8 \times 6 < \text{_____} \times \text{_____}$

For Problems 2–4, write a number model with a letter for the unknown. Then solve the problem and write the answer. Write your number model again with the answer to check that your answer makes sense.

- ② Seven blue jays each have a mass of about 80 grams. What is their total mass?

(number model with letter)

The letter _____ stands for _____.

Seven blue jays have a total mass of about _____ grams.

(number model with answer)

**Unit 9 Assessment** (continued)

- ③ Together, 80 great blue herons have a mass of about 240 kilograms. One California condor has a mass of about 8 kilograms. About how many 8-kilogram California condors would it take to equal the mass of the group of herons?

(number model with letter)

The letter _____ stands for _____.

It would take about _____ California condors to equal the mass of 80 great blue herons.

(number model with answer)

- ④ About how many 50-gram northern cardinals have a mass equal to one 500-gram Atlantic puffin?

(number model with letter)

The letter _____ stands for _____.

It would take about _____ northern cardinals to equal the mass of one Atlantic puffin.

(number model with answer)

**Unit 9 Assessment** (continued)

- ⑤ Use the break-apart strategy to solve each problem.
You may use mental math, drawings, number sentences, or words.
Show your thinking.

a. $5 \times 32 =$ _____

b. $3 \times 61 =$ _____



Unit 9 Assessment (continued)

- c. Ellen drew a rectangle to help solve 8×64 . Here is her work:

	64	
	60	4
8	$8 \times 60 = 480$	$8 \times 4 = 32$
		$\begin{array}{r} 480 \\ + 32 \\ \hline 512 \end{array}$

Explain how Ellen solved the problem.

**Unit 9 Assessment** (continued)

- ⑥ It starts raining at 6:40 A.M. and stops at 9:15 A.M.
How long did it rain?
Show your thinking. You may use an open number line,
your toolkit clock, or other representations.

_____ hours _____ minutes



Unit 9 Challenge

- ① About how many 10-gram chickadees would equal the mass of six 40-gram cardinals?
Explain your thinking using numbers and words.

About _____ chickadees equal the mass of 6 cardinals.

- ② Marlena used the break-apart strategy to solve 6×76 , but she made a mistake:

	76		
	70	6	
6	$6 \times 7 = 42$	$6 \times 6 = 36$	42
			$+ 36$
			$\hline 78$

Explain Marlena's mistake. _____

Use any strategy to correctly solve 6×76 . Show your work.

$6 \times 76 =$ _____

**Unit 9 Challenge** (continued)

- ③ Use the sunrise and sunset information in the chart to figure out the length of day for each city.

City	Sunrise on 12/16/2016	Sunset on 12/16/2016	Length of Day on 12/16/2016
Stonington, Maine	7:07 A.M.	3:59 P.M.	
Brownsville, Texas	7:13 A.M.	5:43 P.M.	

What is the difference between the lengths of day for the two cities?
