

Name _____

Multiply Tens, Hundreds, and Thousands

Essential Question How does understanding place value help you multiply tens, hundreds, and thousands?



Number and Operations in Base Ten—4.NBT.5 Also 4.NBT.A.1

MATHEMATICAL PRACTICES
MP4, MP5, MP7, MP8

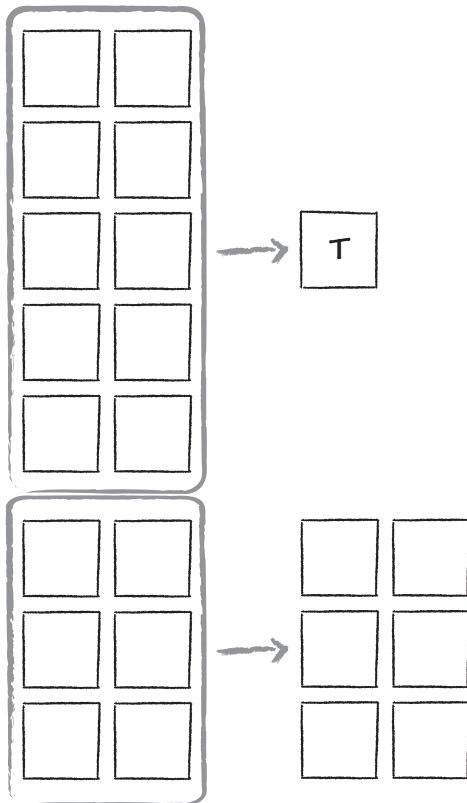
Unlock the Problem

Each car on a train has 200 seats. How many seats are on a train with 8 cars?

Find 8×200 .



One Way Draw a quick picture.



Think: 10 hundreds = 1,000

Think: 6 hundreds = 600

$1,000 + 600 = \underline{\hspace{2cm}}$

Another Way Use place value.

$8 \times 200 = 8 \times \underline{\hspace{1cm}}$ hundreds

$= \underline{\hspace{1cm}}$ hundreds

$= \underline{\hspace{1cm}}$ Think: 16 hundreds is 1 thousand, 6 hundreds.

So, there are $\underline{\hspace{2cm}}$ seats on a train with 8 cars.

Math Talk

MATHEMATICAL PRACTICES 7

Look for a Pattern How can finding 8×2 help you find 8×200 ?

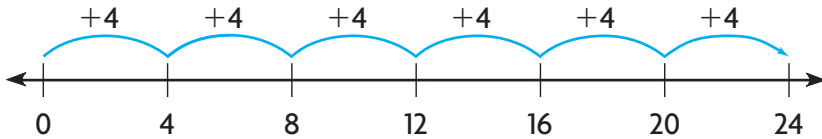
Other Ways

A Use a number line.

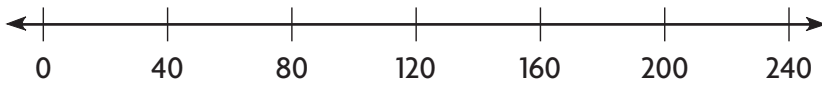
Bob's Sled Shop rents 4,000 sleds each month.
How many sleds does the store rent in 6 months?

Find $6 \times 4,000$.

Multiplication can be thought of as repeated addition.
Draw jumps to show the product.



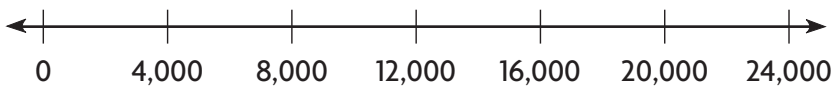
$$6 \times 4 = 24 \quad \leftarrow \text{basic fact}$$



$$6 \times 40 = 240$$



$$6 \times 400 = 2,400$$



$$6 \times 4,000 = 24,000$$

So, Bob's Sled Shop rents _____ sleds in 6 months.

B Use patterns.

Basic fact:

$$3 \times 7 = 21 \quad \leftarrow \text{basic fact}$$

$$3 \times 70 = 210$$

$$3 \times 700 = \underline{\hspace{2cm}}$$

$$3 \times 7,000 = \underline{\hspace{2cm}}$$

Basic fact with a zero:

$$8 \times 5 = 40 \quad \leftarrow \text{basic fact}$$

$$8 \times 50 = 400$$

$$8 \times 500 = \underline{\hspace{2cm}}$$

$$8 \times 5,000 = \underline{\hspace{2cm}}$$

- How does the number of zeros in the product of 8 and 5,000 compare to the number of zeros in the factors? Explain.



MATHEMATICAL PRACTICES 5

Use **Patterns** to tell how the number of zeros in the factors and products changes in Example B.

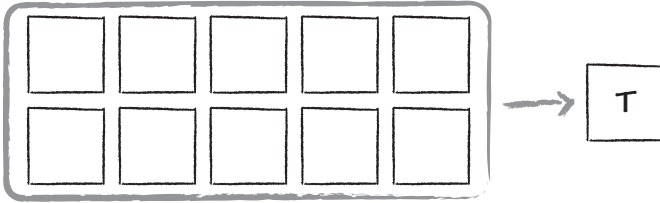


Name _____

Share and Show



1. Use the drawing to find 2×500 .



$2 \times 500 =$ _____



MATHEMATICAL PRACTICES 7

Look for Structure to tell how you would use place value to find 2×500 .

Complete the pattern.

2. $3 \times 8 = 24$

$3 \times 80 =$ _____

$3 \times 800 =$ _____

$3 \times 8,000 =$ _____

3. $6 \times 2 = 12$

$6 \times 20 =$ _____

$6 \times 200 =$ _____

$6 \times 2,000 =$ _____

4. $4 \times 5 =$ _____

$4 \times 50 =$ _____

$4 \times 500 =$ _____

$4 \times 5,000 =$ _____

Find the product.

5. $6 \times 500 = 6 \times$ _____ hundreds
= _____ hundreds
= _____

6. $9 \times 5,000 = 9 \times$ _____ thousands
= _____ thousands
= _____

On Your Own

Find the product.

7. $7 \times 6,000 =$ _____

8. $4 \times 80 =$ _____

9. $3 \times 500 =$ _____



Use Reasoning Algebra Find the missing factor.

10. _____ $\times 9,000 = 63,000$

11. $7 \times$ _____ $= 56,000$

12. $8 \times$ _____ $= 3,200$

13.



Communicate How does the number of zeros in the product of 8 and 5,000 compare to the number of zeros in the factors? Explain.

Unlock the Problem

14. **THINK SMARTER** Joe's Fun and Sun rents beach chairs. The store rented 300 beach chairs each month in April and in May. The store rented 600 beach chairs each month from June through September. How many beach chairs did the store rent during the 6 months?



- a. What do you need to know? _____

- b. How will you find the number of beach chairs? _____

- c. Show the steps you use to solve the problem.
- d. Complete the sentences.
For April and May, a total of _____ beach chairs were rented.
For June through September, a total of _____ beach chairs were rented.
Joe's Fun and Sun rented _____ beach chairs during the 6 months.

15. **GO DEEPER** Mariah makes bead necklaces. Beads are packaged in bags of 50 and bags of 200. Mariah bought 4 bags of 50 beads and 3 bags of 200 beads. How many beads did Mariah buy? _____

16. **THINK SMARTER** Carmen has three books of 20 stamps and five books of 10 stamps. How many stamps does Carmen have? Complete the equation using the numbers on the tiles.

$$\underline{\quad} \times 20 + \underline{\quad} \times 10 = \underline{\quad}$$

3	5
110	50
60	100

Name _____

Multiply Tens, Hundreds, and Thousands



COMMON CORE STANDARD—4.NBT.B.5
Use place value understanding and properties of operations to perform multi-digit arithmetic.

Find the product.

1. $4 \times 7,000 = \underline{\hspace{2cm} 28,000 \hspace{2cm}}$

Think: $4 \times 7 = 28$

So, $4 \times 7,000 = 28,000$

2. $9 \times 60 = \underline{\hspace{2cm}}$

3. $8 \times 200 = \underline{\hspace{2cm}}$

4. $5 \times 6,000 = \underline{\hspace{2cm}}$

5. $7 \times 800 = \underline{\hspace{2cm}}$

6. $8 \times 90 = \underline{\hspace{2cm}}$

7. $6 \times 3,000 = \underline{\hspace{2cm}}$

8. $3 \times 8,000 = \underline{\hspace{2cm}}$

9. $5 \times 500 = \underline{\hspace{2cm}}$

10. $9 \times 4,000 = \underline{\hspace{2cm}}$

Problem Solving



11. A bank teller has 7 rolls of coins. Each roll has 40 coins. How many coins does the bank teller have?

12. Theo buys 5 packages of paper. There are 500 sheets of paper in each package. How many sheets of paper does Theo buy?

13. **WRITE** *Math* Explain how finding 7×20 is similar to finding $7 \times 2,000$. Then find each product.

Lesson Check (4.NBT.B.5)

1. A plane is traveling at a speed of 400 miles per hour. How far will the plane travel in 5 hours?
2. One week, a clothing factory made 2,000 shirts in each of 6 different colors. How many shirts did the factory make in all?

Spiral Review (4.OA.A.1, 4.OA.A.2, 4.OA.A.3, 4.NBT.A.2)

3. Write a comparison sentence to represents this equation.
$$6 \times 7 = 42$$
4. The population of Middleton is six thousand, fifty-four people. Write this number in standard form.

5. In an election for mayor, 85,034 people voted for Carl Green and 67,952 people voted for Maria Lewis. By how many votes did Carl Green win the election?
6. Meredith picked 4 times as many green peppers as red peppers. If she picked a total of 20 peppers, how many green peppers did she pick?
