

Name \_\_\_\_\_

## Divide Tens, Hundreds, and Thousands

**Essential Question** How can you divide numbers through thousands by whole numbers through 10?



Number and Operations in Base Ten—4.NBT.B.6 Also 4.NBT.A.1

**MATHEMATICAL PRACTICES**  
MP2, MP7, MP8

### Unlock the Problem

Dustin is packing apples in gift boxes. Each gift box holds 4 apples. How many boxes can Dustin pack with 120 apples?

You can divide using basic facts and place value.



#### **Example 1** Divide. $120 \div 4$

**STEP 1** Identify the basic fact.  $12 \div 4$

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**STEP 2** Use place value.  $120 = \underline{\hspace{2cm}}$  tens

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**STEP 3** Divide.  $12 \text{ tens} \div 4 = \underline{\hspace{2cm}}$  tens ← **Think:**  $4 \times 3 \text{ tens} = 12 \text{ tens}$

$$= \underline{\hspace{2cm}}$$

$$120 \div 4 = 30$$

So, Dustin can pack  $\underline{\hspace{2cm}}$  boxes.

#### **Example 2** Divide. $1,200 \div 4$

**STEP 1** Identify the basic fact.  $12 \div 4$

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**STEP 2** Use place value.  $1,200 = \underline{\hspace{2cm}}$  hundreds

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**STEP 3** Divide.  $12 \text{ hundreds} \div 4 = \underline{\hspace{2cm}}$  hundreds ← **Think:**  $4 \times 3 \text{ hundreds} = 12 \text{ hundreds}$

$$= \underline{\hspace{2cm}}$$

$$1,200 \div 4 = 300$$

**Math Talk**

**MATHEMATICAL PRACTICES 7**

**Look for a Pattern** What pattern do you notice in the place value of the dividends and quotients?

- MATHEMATICAL PRACTICE 6** **Explain** how to use a basic fact and place value to divide  $4,000 \div 5$ .

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## Share and Show



1. Divide.  $2,800 \div 7$

What basic fact can you use? \_\_\_\_\_

$$2,800 = 28 \underline{\hspace{2cm}}$$

$$28 \text{ hundreds} \div 7 = \underline{\hspace{2cm}}$$

$$2,800 \div 7 = \underline{\hspace{2cm}}$$

2. Divide.  $280 \div 7$

What basic fact can you use? \_\_\_\_\_

$$280 = 28 \underline{\hspace{2cm}}$$

$$28 \text{ tens} \div \underline{\hspace{2cm}} = 4 \underline{\hspace{2cm}}$$

$$280 \div 7 = \underline{\hspace{2cm}}$$



### MATHEMATICAL PRACTICES 6

**Compare** How are Exercises 1 and 2 alike and how are they different?

Use basic facts and place value to find the quotient.

3.  $360 \div 6 = \underline{\hspace{2cm}}$

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

5.  $4,500 \div 9 = \underline{\hspace{2cm}}$

## On Your Own

Use basic facts and place value to find the quotient.

6.  $560 \div 8 = \underline{\hspace{2cm}}$

7.  $6,400 \div 8 = \underline{\hspace{2cm}}$

8.  $3,500 \div 7 = \underline{\hspace{2cm}}$

### MATHEMATICAL PRACTICE 5

**Use Patterns Algebra** Find the unknown number.

9.  $420 \div \blacksquare = 60 \underline{\hspace{2cm}}$

10.  $\blacksquare \div 4 = 30 \underline{\hspace{2cm}}$

11.  $810 \div \blacksquare = 90 \underline{\hspace{2cm}}$

12. **THINK SMARTER** Divide  $400 \div 40$ . Explain how patterns and place value can help.

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13. **GO DEEPER** Eileen collected 98 empty cans to recycle, and Carl collected 82 cans. They packed an equal number of cans into each of three boxes to take to the recycling center. How many cans were in each box?

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14. **GO DEEPER** It costs a baker \$18 to make a small cake. He sells 8 small cakes for \$240. How much more is the selling price of each cake than the cost?

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Name \_\_\_\_\_

## Problem Solving • Applications

15. Jamal put 600 pennies into 6 equal rolls. How many pennies were in each roll?

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16. Sela has 6 times as many coins now as she had 4 months ago. If Sela has 240 coins now, how many coins did she have 4 months ago?

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17. **THINK SMARTER** Chip collected 2,090 dimes. Sue collected 1,910 dimes. They divided all their dimes into 8 equal stacks. How many dimes are in each stack?

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18. **MATHEMATICAL PRACTICE 5** **Communicate** Mr. Roberts sees a rare 1937 penny. The cost of the penny is \$210. If he saves \$3 each week, will Mr. Roberts have enough money to buy the penny in one year? Explain.

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\_\_\_\_\_

19. **GO DEEPER** Mrs. Fletcher bought 5 coins for \$32 each. Later, she sold all the coins for \$300. How much more did Mrs. Fletcher receive for each coin than she paid? Explain.

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**WRITE** *Math* • Show Your Work • • • • •

20. **THINK SMARTER** Which quotients are equal to 20? Mark all that apply.

- (A)  $600 \div 2$                       (D)  $140 \div 7$   
 (B)  $1,200 \div 6$                     (E)  $500 \div 5$   
 (C)  $180 \div 9$

## Connect to Science

### Insect Flight

True flight is shared only by insects, bats, and birds. Flight in insects varies from the clumsy flight of some beetles to the acrobatic moves of dragonflies.

The wings of insects are not moved by muscles attached to the wings. Muscles in the middle part of the body, or thorax, move the wings. The thorax changes shape as the wings move.

### Insect Wing Beats in 3 Minutes

Insect	Approximate Number of Wing Beats
Aeschnid Dragonfly 	6,900
Damselfly 	2,700
Large White Butterfly 	2,100
Scorpion Fly 	5,000

21. About how many times does a damselfly's wings beat in 1 minute?

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22. About how many times do a scorpion fly's wings beat in 6 minutes?

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23. **THINK SMARTER** In one minute, about how many more times do a damselfly's wings beat than a large white butterfly's wings?

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24. **What's the Question?** The answer is about 2,300 times.

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## Divide Tens, Hundreds, and Thousands



**COMMON CORE STANDARD—4.NBT.B.6**  
Use place value understanding and properties of operations to perform multi-digit arithmetic.

Use basic facts and place value to find the quotient.

1.  $3,600 \div 4 = \underline{900}$

**Think:** 3,600 is 36 hundreds.

Use the basic fact  $36 \div 4 = 9$ .

So, 36 hundreds  $\div 4 = 9$  hundreds, or 900.

2.  $240 \div 6 = \underline{\hspace{2cm}}$

3.  $5,400 \div 9 = \underline{\hspace{2cm}}$

4.  $300 \div 5 = \underline{\hspace{2cm}}$

5.  $4,800 \div 6 = \underline{\hspace{2cm}}$

6.  $420 \div 7 = \underline{\hspace{2cm}}$

7.  $150 \div 3 = \underline{\hspace{2cm}}$

8.  $6,300 \div 7 = \underline{\hspace{2cm}}$

9.  $1,200 \div 4 = \underline{\hspace{2cm}}$

10.  $360 \div 6 = \underline{\hspace{2cm}}$

### Problem Solving



11. At an assembly, 180 students sit in 9 equal rows. How many students sit in each row?

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12. Hilary can read 560 words in 7 minutes. How many words can Hilary read in 1 minute?

\_\_\_\_\_

13. A company produces 7,200 gallons of bottled water each day. The company puts 8 one-gallon bottles in each carton. How many cartons are needed to hold all the one-gallon bottles produced in one day?

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14. An airplane flew 2,400 miles in 4 hours. If the plane flew the same number of miles each hour, how many miles did it fly in 1 hour?

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15. **WRITE** *Math* Explain how your knowledge of place value helps you divide a number in the thousands by whole numbers through 10. Give an example to support your explanation.

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## Lesson Check (4.NBT.B.6)

1. A baseball player hits a ball 360 feet to the outfield. It takes the ball 4 seconds to travel this distance. How many feet does the ball travel in 1 second?
2. Sebastian rides his bike 2,000 meters in 5 minutes. How many meters does he bike in 1 minute?

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## Spiral Review (4.OA.A.2, 4.OA.A.3, 4.NBT.B.5, 4.NBT.B.6)

3. A full container of juice holds 64 fluid ounces. How many 7-fluid ounce servings of juice are in a full container?
4. Paolo pays \$244 for 5 identical calculators. About how much does Paolo pay for one calculator?
5. A football team paid \$28 per jersey. They bought 16 jerseys. How much money did the team spend on jerseys?
6. Suzanne bought 50 apples at the apple orchard. She bought 4 times as many red apples as green apples. How many more red apples than green apples did Suzanne buy?

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