Mathematics

5th Grade

Week of: April 27th- May 1st

This packet includes 5 sets of practice problems that align to important math concepts your student has worked on this year. We recommend that your student completes one set of practice problems each day. Encourage your student to the best they can with these concepts. The most important thing is that they continue developing their mathematical fluency skills.

Monday	• My Homework Lesson 3 Powers and Exponents Pg 97-98
Tuesday	• Lesson 3 Reteach Pg 12
Wednesday	• My Homework Lesson 4 Multiplication Patterns Pg 103-104
Thursday	• Lesson 4 Reteach Pg 13
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DAY 1
MY Homework

Lesson 3
Powers and Exponents

Homework Helper [eHelp]   Need help? connectED.mcgraw-hill.com

Write 6 × 6 × 6 using an exponent.

The base is 6. Since 6 is used as a factor three times, the exponent is 3.

So, $6 \times 6 \times 6 = 6^3$.

Practice

Write each product using an exponent.

1. $10 \times 10 \times 10 =$ _____

2. $12 \times 12 =$ _____

Write each power as a product of the same factor. Then find the value.

3. $3^7 =$ _____

4. $10^6 =$ _____

Write the prime factorization of each number using exponents.

5. $20 =$ _____

6. $50 =$ _____

Problem Solving

7. PRACTICE (Mathematical) 8 **Look for a Pattern** The Newfoundland is a large breed of dog. It weighs about 10×10 pounds. Write 10×10 using an exponent. Then find the value of the power. How many pounds does the Newfoundland weigh?

_____

8. The area of San Bernardino County, California, the largest county in the United States, is about 3^9 square miles. Write this as an expression. What is the area of San Bernardino County?

_____

_____

I am hungry. FEED ME!

120

130

150

100

Vocabulary Check [Vocab]

Fill in each blank with the correct term or number to complete each sentence.

9. Numbers expressed using exponents are called _____.

10. The exponent indicates how many times the _____ is used as a factor.

Test Practice

11. A 100-pound person on Earth would weigh about $4 \times 4 \times 4 \times 4$ pounds on Jupiter. Evaluate the expression to determine how much a 100-pound person would weigh on Jupiter.

  Ⓐ 16 pounds   Ⓒ 256 pounds

  Ⓑ 64 pounds   Ⓓ 1,024 pounds

Name _____ Date _____

Lesson 3   Reteach

Powers and Exponents

A product of identical factors can be written by using an *exponent* and a *base*. The base is the number used as a factor. The exponent indicates how many times the base is used as a factor.

$$2 \times 2 \times 2 = 2^3 \longleftarrow \text{exponent}$$

base

Numbers expressed with exponents are called *powers*.

Powers	Words	Expression	Value
4^2	4 to the second power or 4 squared	4×4	16
5^6	5 to the sixth power	$5 \times 5 \times 5 \times 5 \times 5 \times 5$	15,625
7^4	7 to the fourth power	$7 \times 7 \times 7 \times 7$	2,401
9^3	9 to the third power or 9 cubed	$9 \times 9 \times 9$	729

Write each product using an exponent.

1. $3 \times 3 \times 3 = $ _____

2. $2 \times 2 \times 2 \times 2 \times 2 = $ _____

3. $9 \times 9 = $ _____

4. $5 \times 5 \times 5 = $ _____

5. $10 \times 10 = $ _____

6. $3 \times 3 \times 3 \times 3 = $ _____

Write each power as the product of the same factor. Then find the value.

7. $7^2 = $ _____

8. $8^4 = $ _____

9. $2^8 = $ _____

10. $4^3 = $ _____

11. $5^5 = $ _____

12. $7^3 = $ _____

Write the prime factorization of each number using exponents.

13. $40 = $ _____

14. $100 = $ _____

15. $75 = $ _____

16. $147 = $ _____

12

Grade 5 • **Chapter 2** Multiply Whole Numbers

DAY 3
MY Homework

Lesson 4

Multiplication Patterns

Homework Helper

eHelp

Need help? connectED.mcgraw-hill.com

A truck is loaded with 10^2 boxes of skateboards. Each box weighs 36 pounds. What is the total weight of the boxes?

Find 36×10^2 mentally.

1 10^2 without exponents is equal to 100.

2 There are 2 zeros in 100.

3 After placing the zeros to the right of 36, the product is 3,600.

So, the total weight of the boxes is 3,600 pounds.

Practice

Find each product mentally.

1. $70 \times 500 =$ _____

2. $320 \times 10^2 =$ _____

3. $56 \times 10^3 =$ _____

4. $10^2 \times 72 =$ _____

5. $80 \times 3,000 =$ _____

6. $10^3 \times 31 =$ _____

Problem Solving

7. To protect themselves from extreme hot or cold temperatures, American Alligators dig burrows in the mud. Suppose there are 20 alligators, each with 50 feet of burrows. What is the total length of all the burrows?

_____

Later GATOR!

8. Paulita reads an average of 20 pages each day. She has 6 days to read 10^2 pages. Will she finish her reading in 6 days? Explain.

_____

_____

9. **Mathematical PRACTICE 1 Make Sense of Problems** Explain how using basic facts can help you find $10 \times 20 \times 30 \times 40$ mentally.

_____

_____

_____
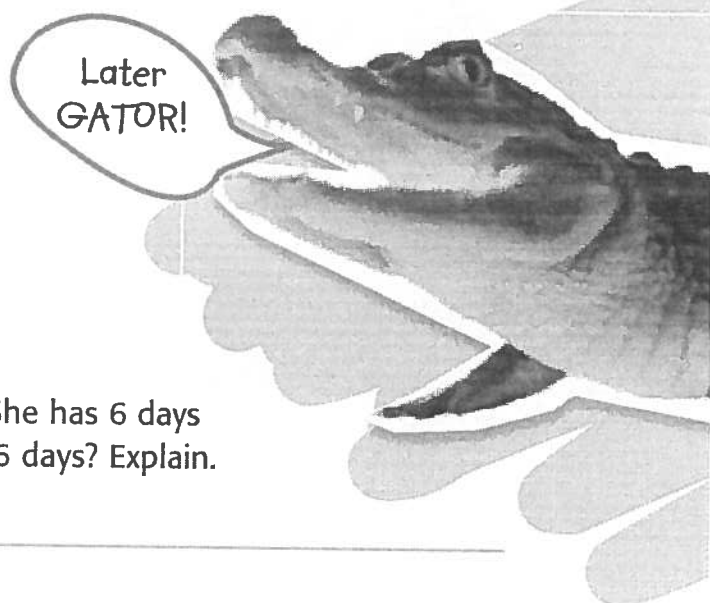
Vocabulary Check

Fill in the blank with the correct term or number to complete the sentence.

10. Numbers like 10, 100, 1,000, and so on are called

_____ .

Test Practice

11. A music store sold 10^3 CDs and 10^2 CD players. If each CD costs $12 and each CD player costs $35, what was the store's total earnings?

Ⓐ $15,500   Ⓒ $36,200

Ⓑ $24,500   Ⓓ $47,000

Lesson 4   Reteach
Multiplication Patterns

DAY 4

EXAMPLE

To multiply by multiples of 10, 100, and 1,000, you can use basic facts and patterns.
Multiply 40×800.

Start with the basic fact. $4 \quad \times \quad 8 \quad = 32$

Count the number of zeros in each $40 \quad \times \quad 800$
factor and add them together. $\uparrow \qquad \uparrow$

                                     1 zero $+$ 2 zeros $=$ 3 zeros

Write that number of zeros in the product. $40 \quad \times \quad 800 \quad = 32,000$ or 32×10^3

Complete.

1. 20×60

Basic fact: $2 \times 6 =$ _____

Number of zeros in each factor:

_____ $+ 1 =$ _____

Product: $20 \times 60 =$ _____

2. 9×80

Basic fact: _____

Number of zeros in each factor:

$0 +$ _____ $=$ _____

Product: _____

Find each product mentally.

3. $5 \times 9 =$ _____

$5 \times 90 =$ _____

$5 \times 900 =$ _____

$5 \times 9,000 =$ _____

6. $6 \times 60 =$ _____

$60 \times 60 =$ _____

$600 \times 60 =$ _____

$6,000 \times 60 =$ _____

4. $3 \times 6 =$ _____

$3 \times 60 =$ _____

$3 \times 600 =$ _____

$3 \times 6,000 =$ _____

7. $7 \times \$3 =$ _____

$70 \times \$3 =$ _____

$700 \times \$3 =$ _____

$7,000 \times \$3 =$ _____

5. $4 \times 12 =$ _____

$40 \times 12 =$ _____

$400 \times 12 =$ _____

$4,000 \times 12 =$ _____

8. $5 \times 40 =$ _____

$50 \times 40 =$ _____

$500 \times 40 =$ _____

$5,000 \times 40 =$ _____

Name _____ Date _____

Lesson 4 Enrich

Multiplication Patterns

DAY 5

Multiply the factors shown in the parentheses to complete these facts.

1. Adult great white sharks weigh about (2 × 800) _____ pounds and may grow to be about (4 × 5) _____ feet long.

2. The smallest mammal, a pygmy shrew, is only about (3 × 1) _____ inches long from head to tail.

3. The largest mammal is the blue whale. Newborn calves weigh about (20 × 300) _____ pounds. The heaviest adult caught weighed more than (50 × 7,000) _____ pounds.

4. The bat with the largest wingspan is the Bismarck flying fox. Its wingspan may be about (10 × 6) _____ inches long.

5. The largest carnivore, the polar bear, can weigh as many as (30 × 40) _____ pounds and have a length of about (5 × 20) _____ inches.

6. The fastest recorded speed of a kangaroo is (8 × 5) _____ miles per hour.

7. In the 1950s, an Arctic tern flew the longest distance ever recorded for a bird, (700 × 20) _____ miles.

8. In 1989, scientists recorded an elephant seal diving about (7 × 700) _____ feet.

9. The largest game preserve in the world is Estosha National Park in Namibia. It covers about (50 × 800) _____ square miles.

10. The Monterey Bay Aquarium in California has more than (600 × 600) _____ specimens of animals and plants.