Name .....

MY Homework

Lesson 4
The Associative Property

Homework Helper

eHelp

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Taylor and his friend bought 2 small pizzas. They cut each pizza into 4 pieces. Taylor put 5 black olives on each piece of pizza. How many black olives did Taylor use in all?

Find $2 \times 4 \times 5$. Use parentheses to group the factors.

One Way **Multiply 2 and 4 first.**

$(2 \times 4) \times 5$

8×5

40

Another Way **Multiply 4 and 5 first.**

$2 \times (4 \times 5)$

2×20

40

Taylor used 40 black olives in all.

Either way you group the factors, the product is 40.

The Associative Property states that the way factors are grouped does not change the product.

Practice

Use parentheses to group two factors. Then find each product.

1. $2 \times 3 \times 6 =$ 36

2. $5 \times 2 \times 2 =$ 20

Algebra **Find each missing factor.**

3. $4 \times (\square \times 4) = 32$

The unknown is 2.

4. $(2 \times \square) \times 6 = 60$

The unknown is 5.

5. $(5 \times \square) \times 1 = 45$

The unknown is 9.

6. $\square \times (4 \times 2) = 48$

The unknown is 6.

Problem Solving

Mathematical PRACTICE 2 **Use Number Sense**

7. Mariette bought 4 packs of sparkling water. There were 6 bottles in each pack. If each bottle cost $2, how much did Mariette spend on sparkling water?

$48

8. Jamal and Brianna each bought 3 oranges. They sliced each orange into 6 pieces. How many orange slices did Jamal and Brianna have altogether?

36 orange slices

9. Mr. and Mrs. Perry packed their lunch 5 days in a row. Each of them packed 3 oatmeal cookies for dessert every day. What is the total number of cookies they packed for lunch that week?

30 cookies

Vocabulary Check

10. Write a definition for the Associative Property of Multiplication.

Sample answer: The Associative Property of Multiplication states that the way factors are grouped does not change the product.

Test Practice

11. What is the unknown in $(3 \times 3) \times 7 = \square$

Ⓐ 21 Ⓒ 42

Ⓑ 30 Ⓓ 63