MATH

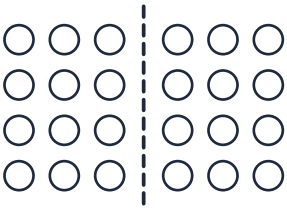
Distributive property of multiplication

Name _____ Date _____

I can break a fact into two easier facts.

1 How it works

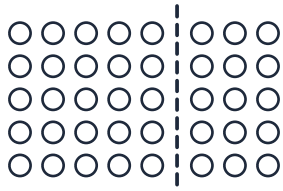
A hard fact can be split into easier ones. To find 4 × 7, split 7 into 5 and 2: 4 × 5 = 20 and 4 × 2 = 8, so 4 × 7 = 20 + 8 = 28. Draw a line through the array to see the two parts.



4 × 6 = 4 × 3 + 4 × 3 = 24

2 Break the array apart

Find each part, then add.



5 × 5 = ☐ 5 × 3 = ☐

5 × 8 = ☐ + ☐ = ☐



6 × 5 = ☐ 6 × 1 = ☐

6 × 6 = ☐ + ☐ = ☐



5 × 5 = ☐ 5 × 4 = ☐

5 × 9 = ☐ + ☐ = ☐

How did I do? ☆ ☆ ☆

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Practice

Name _____ Date _____

I can break a fact apart into two easier facts.

1 Break apart to solve

Use 5 and what is left.

1. $8 \times 7 = 8 \times 5 + 8 \times \square = \square + \square = \square$
2. $3 \times 9 = 3 \times 5 + 3 \times \square = \square + \square = \square$
3. $6 \times 7 = 6 \times 5 + 6 \times \square = \square + \square = \square$
4. $3 \times 8 = 3 \times 5 + 3 \times \square = \square + \square = \square$
5. $8 \times 8 = 8 \times 5 + 8 \times \square = \square + \square = \square$
6. $9 \times 6 = 9 \times 5 + 9 \times \square = \square + \square = \square$
7. $3 \times 6 = 3 \times 5 + 3 \times \square = \square + \square = \square$
8. $6 \times 8 = 6 \times 5 + 6 \times \square = \square + \square = \square$

How did I do? ☆ ☆ ☆

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Think deeper

Name _____ Date _____

I can explain my thinking about multiplication.

1 Two ways to break it apart

Split the same fact in two different ways.

7 × 7

= 7 × 5 + 7 × ☐ = ☐

= 7 × 10 − 7 × ☐ = ☐

6 × 9

= 6 × 5 + 6 × ☐ = ☐

= 6 × 10 − 6 × ☐ = ☐

2 Think about it

1. How can 6 × 5 help you find 6 × 8?
2. What is 4 × 12 as 4 × 10 + 4 × 2?
3. Why split 7 into 5 and 2?

How did I do? ☆ ☆ ☆

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Word problems

Name _____ Date _____

I can use multiplication to solve a problem.

1 Read, draw, solve

Draw groups, an array or jumps in the box.

1 A box has 7 rows of 6 eggs. Break 7 into 5 and 2 to find how many eggs.

Answer: _____

2 There are 8 teams with 6 players each. Use 8 × 5 + 8 × 1 to find the total.

Answer: _____

3 Omar has 9 pages with 7 stickers on each. Find 9 × 7 using 9 × 5 + 9 × 2.

Answer: _____

4 Zara says 6 × 9 = 6 × 10 − 6. Is Zara right?

Answer: _____

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: distributive property of multiplication

1 Page 1

Break apart: 1) 25 and 15; 25 + 15 = 40; 2) 30 and 6; 30 + 6 = 36; 3) 25 and 20; 25 + 20 = 45.

2 Page 2

Break apart: 1) 8 × 2; 40 + 16 = 56; 2) 3 × 4; 15 + 12 = 27; 3) 6 × 2; 30 + 12 = 42; 4) 3 × 3; 15 + 9 = 24; 5) 8 × 3; 40 + 24 = 64; 6) 9 × 1; 45 + 9 = 54; 7) 3 × 1; 15 + 3 = 18; 8) 6 × 3; 30 + 18 = 48.

3 Page 3

Two ways: 1) 7 × 2 and 7 × 3; 49; 2) 6 × 4 and 6 × 1; 54.
Think: 1) 6 × 5 + 6 × 3 = 30 + 18 = 48; 2) 40 + 8 = 48; 3) Fives and twos are easy facts.

4 Page 4: word problems

1) 5 × 6 + 2 × 6 = 30 + 12 = 42 eggs
2) 40 + 8 = 48 players
3) 45 + 18 = 63 stickers
4) Yes. 60 − 6 = 54, and 6 × 9 = 54.

5 Teaching tip

Fives and tens are the best "helper" facts. Teach children to split the bigger factor into 5 and the rest, or to use 10 and take away.

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