MATH

Commutative property of multiplication

Name _____ Date _____

I can use turn-around facts to multiply.

1 How it works

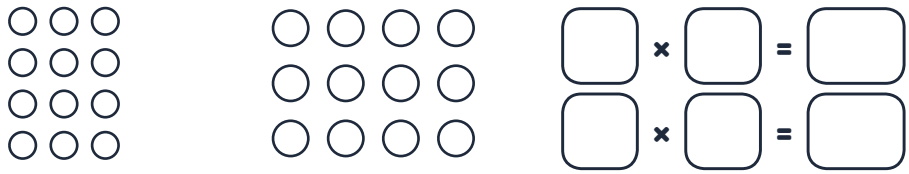
You can multiply numbers in any order and get the same answer. 2 × 4 = 8 and 4 × 2 = 8. Turn an array on its side and the total stays the same. If you know one fact, you know its turn-around fact too.

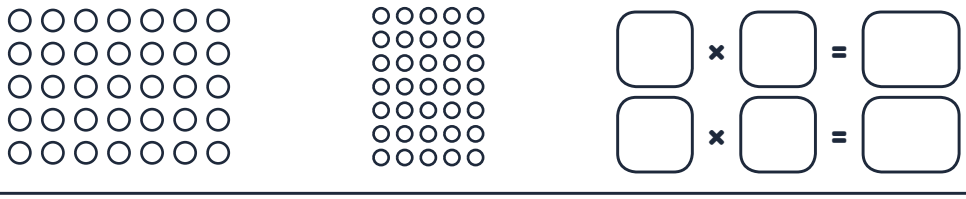


2 × 4 = 4 × 2 = 8

2 Turn the array. Write both facts.

The total stays the same.







How did I do? ☆ ☆ ☆

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Practice

Name _____ Date _____

I can use a fact I know to find its turn-around fact.

1 Write the turn-around fact

5 × 4 = 20, so ☐ × ☐ = ☐

6 × 2 = 12, so ☐ × ☐ = ☐

7 × 6 = 42, so ☐ × ☐ = ☐

5 × 8 = 40, so ☐ × ☐ = ☐

9 × 6 = 54, so ☐ × ☐ = ☐

3 × 9 = 27, so ☐ × ☐ = ☐

4 × 5 = 20, so ☐ × ☐ = ☐

2 × 8 = 16, so ☐ × ☐ = ☐

3 × 5 = 15, so ☐ × ☐ = ☐

7 × 5 = 35, so ☐ × ☐ = ☐

2 Find the missing number

Use the turn-around idea.

7 × ☐ = 4 × 7

8 × ☐ = 4 × 8

2 × ☐ = 5 × 2

9 × ☐ = 8 × 9

7 × ☐ = 9 × 7

8 × ☐ = 5 × 8

How did I do? ☆ ☆ ☆

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Think deeper

Name _____ Date _____

I can explain my thinking about multiplication.

1 True or false? Circle it.

1. 6 × 2 = 6 + 2 — true / false
2. 5 × 8 = 8 × 6 — true / false
3. 4 × 7 = 7 × 4 — true / false
4. 9 × 3 = 3 × 9 — true / false

2 Show it two ways

Draw both arrays.

3 × 5 and 5 × 3

2 × 6 and 6 × 2

3 Think about it

1. What are 0 × 9 and 9 × 0?
2. Does turning around work for 8 − 3?
3. If 7 × 6 = 42, what is 6 × 7?

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 Which is more: 3 bags of 7 apples, or 7 bags of 3 apples?

Answer: _____

2 Leo knows 9 × 2 = 18. What is 2 × 9?

Answer: _____

3 A garden has 5 rows of 8 plants. Turn it around: how many rows, and how many in each row?

Answer: _____

4 Hana says 6 × 4 and 4 × 6 have different answers. Is Hana right?

Answer: _____

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: commutative property of multiplication

1 Page 1

Facts: 1) 4 × 3 = 3 × 4 = 12; 2) 5 × 7 = 7 × 5 = 35; 3) 3 × 6 = 6 × 3 = 18.

2 Page 2

Turn-around: 1) 4 × 5 = 20; 2) 9 × 3 = 27; 3) 2 × 6 = 12; 4) 5 × 4 = 20; 5) 6 × 7 = 42; 6) 8 × 2 = 16; 7) 8 × 5 = 40; 8) 5 × 3 = 15; 9) 6 × 9 = 54; 10) 5 × 7 = 35.

Missing: 1) 4; 2) 8; 3) 4; 4) 9; 5) 5; 6) 5.

3 Page 3

True or false: 1) false; 2) false; 3) true; 4) true.

Drawings: answers will vary.

Think: 1) Both are 0; 2) No: 3 − 8 is not 5; 3) 42.

4 Page 4: word problems

1) They are the same: 21 apples.

2) 18

3) 8 rows of 5. Still 40 plants.

4) No. Both are 24.

5 Teaching tip

Show children that this halves the number of facts they must learn. Once they know 3 × 8, they already know 8 × 3.

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