

Grade 3 - Properties of Multiplication - Quiz

Common Core 3.OA.B.5 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This **properties multiplication quiz** for 3rd Grade covers properties of multiplication (Common Core 3.OA.B.5), with a free PDF to print.

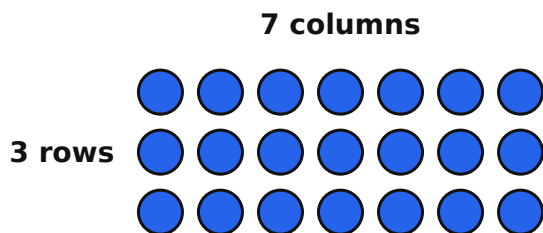
Try these 10 multiple choice questions on the commutative, associative, and distributive properties (3.OA.B.5). Pick one answer, then read the explanation to see why it is right.

Grade 3 · Common Core State Standards: **3.OA.B.5**

Properties multiplication quiz: 10 questions

Questions

Question 1



An array: 3 rows of 7.

Which multiplication sentence matches this array turned on its side?

- A. $7 \times 7 = 49$
- B. $7 \times 3 = 21$
- C. $7 + 3 = 10$
- D. $3 \times 3 = 9$

Question 2

Which number makes this true? $9 \times 4 = 4 \times n$

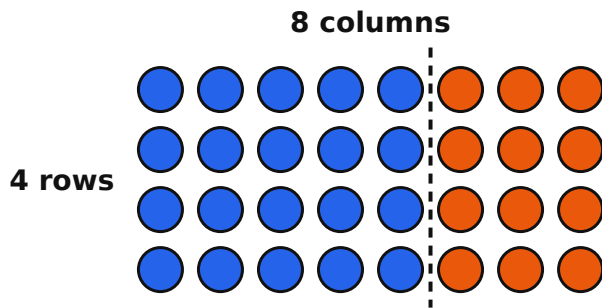
- A. $n = 36$
- B. $n = 9$
- C. $n = 4$
- D. $n = 5$

Question 3

Which property is shown? $((3 \times 2) \times 4 = 3 \times (2 \times 4))$

- A. Commutative property
- B. Distributive property
- C. Zero property
- D. Associative property

Question 4



4 rows of 8 split into 5 columns and 3 columns.

Which sentence breaks apart this array?

- A. $(4 \times 8 = 4 \times 5 + 3)$
- B. $(4 \times 8 = 4 \times 5 + 8 \times 3)$
- C. $(4 \times 8 = 5 \times 3 + 4)$
- D. $(4 \times 8 = 4 \times 5 + 4 \times 3)$

Question 5

Find (n) : $(8 \times 6 = 8 \times 4 + 8 \times n)$

- A. $(n = 2)$
- B. $(n = 4)$
- C. $(n = 6)$
- D. $(n = 3)$

Question 6

What is $(2 \times 5 \times 7)$?

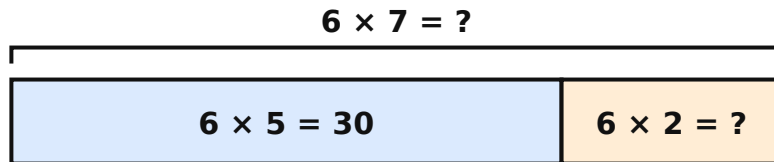
- A. (14)
- B. (35)
- C. (70)
- D. (17)

Question 7

Which expression has the same value as $(3 \times (2 \times 6))$?

- A. $((3 + 2) \times 6)$
- B. $(3 \times 2 + 6)$
- C. $((3 \times 2) \times 6)$
- D. $((3 \times 2) + (3 \times 6))$

Question 8



Tape diagram for 6×7 .

What is the total?

- A. 42
- B. 36
- C. 32
- D. 47

Question 9

Aisha puts 6 photos on each of 8 album pages. She knows $8 \times 5 = 40$ and $8 \times 1 = 8$. How many photos are there in all?

- A. 48 photos
- B. 41 photos
- C. 44 photos
- D. 14 photos

Question 10

Which number sentence is true?

- A. $(7 \times 3 = 3 \times 4)$
- B. $(2 \times 9 = 9 \times 2)$
- C. $(4 + 6 = 6 \times 4)$
- D. $(5 \times 8 = 8 \times 8)$

Answers

1. **B** – Turned on its side, the array has 7 rows of 3 dots, which is 21. Adding the factors instead of multiplying is a common mistake.
2. **B** – Swapping the factors keeps the product, so the missing factor is 9. Choosing 36 mixes up a factor with the product.
3. **D** – The factors keep their order, but the parentheses move. That is regrouping, so it is the associative property.
4. **D** – Both parts have 4 rows, so each part is multiplied by 4. Forgetting to multiply the second part is a common mistake.
5. **A** – Six is split into 4 and 2, so n is 2. Choosing 6 just copies a factor from the problem.
6. **C** – First, $2 \times 5 = 10$. Then $10 \times 7 = 70$. Adding the numbers gives 14, which is wrong.
7. **C** – Both expressions multiply the same three factors and equal 36. The other choices add somewhere, which changes the value.
8. **A** – $30 + 12 = 42$. Adding $30 + 2 = 32$ forgets to multiply the 2 by 6.
9. **A** – $6 = 5 + 1$, so $8 \times 6 = 40 + 8 = 48$. Adding $40 + 1$ forgets to multiply the 1 by 8.
10. **B** – Only the first sentence has the same two factors on both sides. The other three have different products on each side.

Remember

Remember

- Commutative: $3 \times 6 = 6 \times 3$. The order of two factors does not change the product.
- Associative: $(2 \times 3) \times 4 = 2 \times (3 \times 4)$. Regrouping three factors does not change the product.
- Distributive: $6 \times 7 = 6 \times 5 + 6 \times 2$. Split a factor, multiply the parts, then add.
- An array turned on its side shows the commutative property.
- Known facts help you find unknown facts, such as 5s and 2s for 7s and 8s.

How to use this properties multiplication quiz

Answer each question, read the explanation that appears, and keep track of your score. A score of 8 out of 10 or more means you are ready for the test.

Download the properties multiplication quiz as a PDF with the button below and keep it with your notes.

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