THIRD SPACE LEARNING

Associative Property Worksheet

Number and Quantity

Grades 1 to 3

Skill Questions

Name: .....

Date: .....

1 Which number belongs in the blank?

$$(5 + 2) + 8 = (2 + \_\_\_) + 5$$

Answer

2 Solve.

$$(6 + 4) + 9 = ?$$

Answer

3 Choose two numbers to group. Then complete the equation.

$$16 + 5 + 5 = ?$$

Answer

4 Choose two numbers to group. Then complete the equation.

$$3 + 8 + 7 = ?$$

Answer

5 Break apart one of the numbers into two addends. Then use the associative property to solve the equation.

$$38 + 15 = ?$$

Answer

6 Which number belongs in the blank?

$$(9 \times 7) \times 5 = (7 \times \_\_\_) \times 9$$

Answer

7 Solve.

$$(5 \times 4) \times 6 = ?$$

Answer

8 Choose two numbers to group. Then complete the equation.

$$8 \times 2 \times 5 = ?$$

Answer

9 Choose two numbers to group. Then complete the equation.

$5 \times 7 \times 6 = ?$

Answer

10 Break apart one of the numbers into two factors. Then use the associative property to solve the equation.

$14 \times 5 = ?$

Answer

Applied Questions

11 Chloe writes an equation on her paper 13 + 7 + 23 and shows her friend Wyatt two ways to solve it:

(13 + 7) + 23
20 + 23 = 43 ✓

13 + (7 + 23)
13 + 30 = 43 ✓

Wyatt wants to use the same method to solve the equation 16 – 12 – 2.

(16 – 12) – 2

16 – (12 – 2)

Will the same method work for Wyatt's equation? Why or why not?

Answer

12 Marnie and Pete are filling bags with candy at a candy shop.
Marnie puts 8 blue candies, 7 green candies, and 2 yellow candies into her bag.
Pete puts 7 yellow candies, 8 green candies, and 2 blue candies into her bag.

Who put more candy in their bag? How do you know?

Answer

13 Juniper made a beaded necklace. She placed 28 purple beads, 14 pink beads, and 6 white beads on the necklace. How many beads did she put on the necklace in all?

Answer

14 There are 4 third grade classrooms. Each classroom has 3 groups of desks with 5 desks in each group. How many desks are there in all?

Write an equation and solve.

Answer

15 A farmer has 2 flocks of sheep. Each flock has 11 sheep. Each sheep has 4 legs! How many sheep legs are there in all?

Write an equation and solve.

Answer

Answers

Question number	Question	Answers	Standard
1	Which number belongs in the blank? (5 + 2) + 8 = (2 + ___) + 5	8	3.OA.B.5
2	Solve. (6 + 4) + 9 = ?	19	3.OA.B.5
3	Choose two numbers to group. Then complete the equation. 16 + 5 + 5 = ?	Students can choose to group the numbers in any way and still get the same answer, but the most efficient way would be to add 5 and 5 first to get a 10, then add the 16. (5 + 5) + 16 10 + 16 = 26	3.OA.B.5
4	Choose two numbers to group. Then complete the equation. 3 + 8 + 7 = ?	Students can choose to group the numbers in any way and still get the same answer, but the most efficient way would be to add 7 and 3 first to get a 10, then add the 8. (3 + 7) + 8 10 + 8 = 18	3.OA.B.5

Associative Property Worksheet | Grades 1 to 3 | Answers

Question number	Question	Answers	Standard
5	Break apart one of the numbers into two addends. Then use the associative property to solve the equation. 38 + 15 = ?	Students can break apart a number and then solve in any order; the most efficient way would be to break apart the 15 into 2 and 13 to add 2 to the 38. This gives an easier number to work with (40). 38 + 15 = ?  38 + 2 + 13 = ? (38 + 2) +D 13 = ? 40 + 13 = 53	3.OA.B.5
6	Which number belongs in the blank? (9 × 7) × 5 = (7 × ___) × 9	5	3.OA.B.5
7	Solve. (5 × 4) × 6 = ?	120	3.OA.B.5
8	Choose two numbers to group. Then complete the equation. 8 × 2 × 5 = ?	Students can choose to group the numbers in any way and still get the same answer, but the most efficient way would be to multiply 5 and 2 first to get 10, then multiply by 8. (5 × 2) × 8 10 × 8 = 80	3.OA.B.5

Associative Property Worksheet | Grades 1 to 3 | Answers

Question number	Question	Answers	Standard
9	Choose two numbers to group. Then complete the equation. $5 \times 7 \times 6 = ?$	Students can choose to group the numbers in any way and still get the same answer, but the most efficient way would be to multiply 5 and 6 first to get 30, then multiply by 7. $(5 \times 6) \times 7$ $30 \times 7 = 210$	3.OA.B.5
10	Break apart one of the numbers into two factors. Then use the associative property to solve the equation. $14 \times 5 = ?$	Students can break apart a number and then solve in any order; the most efficient way would be to break apart the 14 into 2×7, then group the 5 and 2 to multiply first. This gives an easier number to work with (10). $14 \times 5 = ?$ $2 \times 7 \times 5 = ?$ $(2 \times 5) \times 7 = ?$ $10 \times 7 = 70$	3.OA.B.5

Question number	Question	Answers	Standard
11	Chloe writes an equation on her paper 13 + 7 + 23 and shows her friend Wyatt two ways to solve it: (13 + 7) + 23 13 + (7 + 23) 20 + 23 = 43 ✓ 13 + 30 = 43 ✓ Wyatt wants to use the same method to solve the equation 16 – 12 – 2. (16 – 12) – 2 16 – (12 – 2) Will the same method work for Wyatt's equation? Why or why not?	No, it won't work because when you group the numbers differently you end up with different numbers. (16 – 12) – 2 16 – (12 – 2) 4 – 2 = 2 X 16 – 10 = 6	3.OA.B.5
12	Marnie and Pete are filling bags with candy at a candy shop. Marnie puts 8 blue candies, 7 green candies, and 2 yellow candies into her bag. Pete puts 7 yellow candies, 8 green candies, and 2 blue candies into her bag. Who put more candy in their bag? How do you know?	They each put the same number of candies in their bag. Marnie: 8 + 7 + 2 = ? (8 + 2) + 7 = ? 10 + 7 = 17 17 candies Pete: 7 + 8 + 2 = ? 7 + (8 + 2) = ? 7 + 10 = 17 17 candies	3.OA.B.5
13	Juniper made a beaded necklace. She placed 28 purple beads, 14 pink beads, and 6 white beads on the necklace. How many beads did she put on the necklace in all?	28 + 14 + 6 = ? 28 + (14 + 6) = ? 28 + 20 = 48 beads	3.OA.B.5

Associative Property Worksheet | Grades 1 to 3 | Answers

Question number	Question	Answers	Standard
14	There are 4 third grade classrooms. Each classroom has 3 groups of desks with 5 desks in each group. How many desks are there in all? Write an equation and solve.	$4 \times 3 \times 5 = ?$ $(4 \times 5) \times 3$ $20 \times 3 = 60$ desks	3.OA.B.5
12	A farmer has 2 flocks of sheep. Each flock has 11 sheep. Each sheep has 4 legs! How many sheep legs are there in all? Write an equation and solve.	$2 \times 11 \times 4$ $(2 \times 4) \times 11$ $8 \times 11 = 88$ sheep legs	3.OA.B.5

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