THIRD SPACE LEARNING

Distributive Property Worksheet

Number and Quantity

Grades 1 to 3

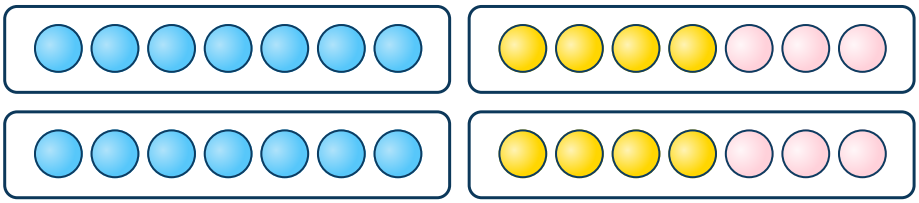
Skill Questions

Name: .....

Date: .....

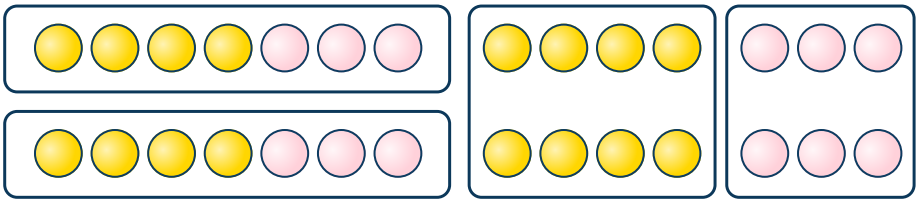
1 Use the model to fill in the missing number.

2 x ___ = 2 x (4 + 3)



2 Use the model to fill in the missing number.

2 x (4 + 3) = (2 x __) + (__ x 3)



3 Draw a model to show 3 x 3 = 3 x (2 + 1).

4 Draw a model to show 4 x 5 = (2 + 2) x 5.

5 Fill in the missing number:

5 x (5 + ___) = 5 x 7

6 Fill in the missing number:

___ x 8 = (2 + 3) x 8

7 Fill in the missing number:

6 x 3 = (4 + 2) x ___

8 Solve 7 x (5 + 1) = ?

Answer

9 Solve (3 + 4) x 6 = ?

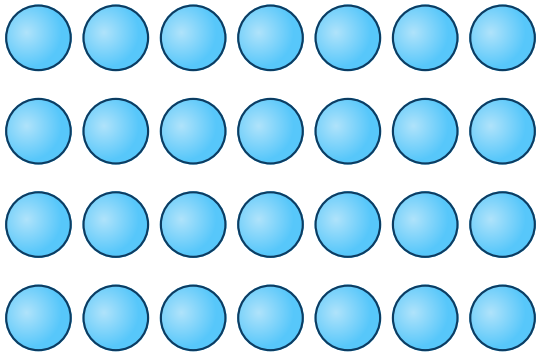
Answer

10 Solve (1 + 8) x 5 = ?

Answer

Applied Questions

11 Draw a straight line through the array. Write an equation to represent the two smaller arrays you create. Then explain your equation.



_____

_____

_____

12 Malachi wrote the following equation.
7 x 11 = (6 + 1) x 10

Explain Malachi's equation and correct any mistakes.

_____

_____

_____

13 Asa is baking cookies. Asa normally organizes the cookies in a 9 x 9 array on a large pan. This time Asa wants to use two small pans, with two 5 x 4 arrays. Will this work? Show your work and explain your answer.

_____

_____

_____

14 Amelia has 4 groups of 12 erasers. Both Leo and Remi have 2 groups of 12 erasers. If Leo and Remi combine their erasers, will they have the same as Amelia? Show your work and explain your answer.

_____

_____

_____

15 What value makes the equation true? Explain how you solved.

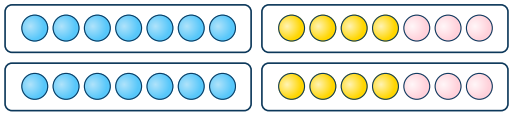
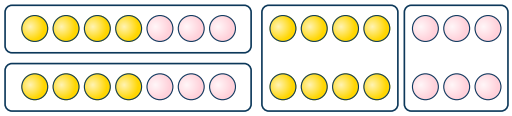
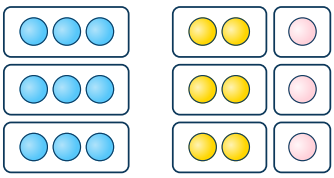
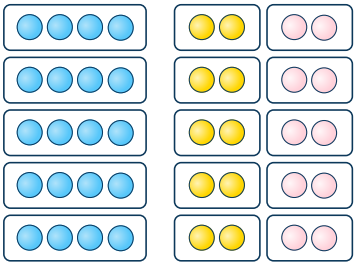
$8 \times (1 + 4) = (\_\_ + 1) \times 10$

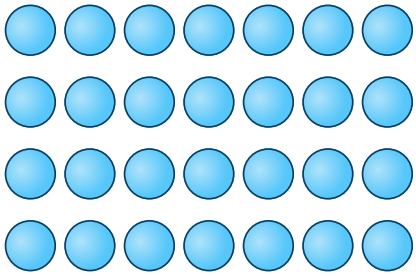
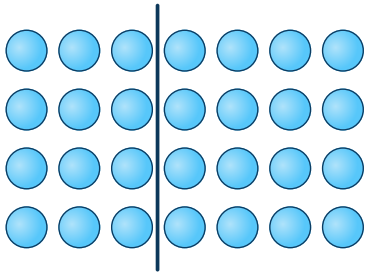
_____

_____

_____

Answers

Question number	Question	Answers	Standard
1	Use the model to fill in the missing number. 2 x ___ = 2 (4 + 3) 	2 x 7 = 2 x (4 + 3)	3.OA.B.5
2	Use the model to fill in the missing number. 2 x (4 + 3) = (2 x __) + (__ x 3) 	2 x (4 + 3) = (2 x 4) + (2 x 3)	3.OA.B.5
3	Draw a model to show 3 x 3 = 3 x (2 + 1).		3.OA.B.5
4	Draw a model to show 4 x 5 = (2 + 2) x 5.		3.OA.B.5
5	Fill in the missing number: 5 x (5 + ___) = 5 x 7	5 x (5 + 2) = 5 x 7	3.OA.B.5
6	Fill in the missing number: ___ x 8 = (2 + 3) x 8	5 x 8 = (2 + 3) x 8	3.OA.B.5
7	Fill in the missing number: 6 x 3 = (4 + 2) x ___	6 x 3 = (4 + 2) x 3	3.OA.B.5

Question number	Question	Answers	Standard
8	Solve 7 x (5 + 1) = ?	42	3.OA.B.5
9	Solve (3 + 4) x 6 = ?	42	3.OA.B.5
10	Solve (1 + 8) x 5 = ?	45	3.OA.B.5
11	Draw a straight line through the array. Write an equation to represent the two smaller arrays you create. Then explain your equation. 	*Equations and explanations may vary.* Example answer:  4 x 7 = 4 x 3 + 4 x 4 The large array is 4 x 7. Drawing the line breaks it up into two smaller arrays. The first array is 4 x 3 and the second is 4 x 4. Combining them (or removing the line) is equal to the large array.	3.OA.B.5
12	Malachi wrote the following equation. 7 x 11 = (6 + 1) x 10 Explain Malachi's equation and correct any mistakes.	*Explanations may vary.* Example answer: Malachi started with 7 x 11, or 7 groups of 11. He broke the 7 up into 6 + 1, and he can multiple each part by 11. This means he needs to change the 10 to an 11.	3.OA.B.5

Question number	Question	Answers	Standard
13	Asa is baking cookies. Asa normally organizes the cookies in a 9 x 9 array on a large pan. This time Asa wants to use two small pans, with two 5 x 4 arrays. Will this work? Show your work and explain your answer.	*Equations and explanations may vary.* Example answer: 5 x 4 + 5 x 4 = 10 x 4 OR 5 x 8 No, this is not the same. This will make enough for 40 cookies, but not the 81 cookies in the 9 x 9 array.	3.OA.B.5
14	Amelia has 4 groups of 12 erasers. Both Leo and Remi have 2 groups of 12 erasers. If Leo and Remi combine their erasers, will they have the same as Amelia? Show your work and explain your answer.	*Equations and explanations may vary.* Example answer: 4 x 12 = 2 x 12 + 2 x 12 Yes, they will have the same, because 2 groups of 12 twice is equal to 4 groups of 12.	3.OA.B.5
15	What value makes the equation true? Explain how you solved. 8 x (1 + 4) = (__ + 1) x 10	*Explanations may vary.* Example answer: 8 x (1 + 4) is equal to 40. The other side must be equal to 40. Since 4 x 10 is 40, then ___ + 1 must equal 4, so the missing number is 3.	3.OA.B.5

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