LESSON MAKER PRO

Multiply Smart Moves

Switch, group, or split factors to make multiplication easier.

GRADE 3 · 3.OA.B.5

CCSS.Math.Content.3.OA.B.5 "Apply properties of operations as strategies to multiply and divide. 2 Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 ×..."

NAME _____ DATE _____

USE NUMBER MOVES

You can switch factors, group factors in a new way, or split one factor into an addition fact. These moves do not change the product. Choose a move that makes the multiplication easier to solve.

WORKED EXAMPLE

Solve: 12 x (3 + 4)

1. 12 x (3 + 4) = (12 x 3) + (12 x 4)
2. 12 x 3 = 36
3. 12 x 4 = 48
4. 36 + 48 = 84

Answer: 84

PRACTICE 6 problems

1 8 x 6 = 6 x __

ANSWER _____

2 Use grouping to solve: 2 x 5 x 9 = __

ANSWER _____

3 Use splitting to solve: 9 x (6 + 2) = __

ANSWER _____

4 8 x 6 = 8 x (5 + __)

ANSWER _____

5 Choose the expression equal to 5 x (8 x 6).
A. (5 x 8) x 6 B. (5 x 6) + 8 C. 5 + (8 x 6)

ANSWER _____

6 Use splitting to solve: 5 x (6 + 2) = __

ANSWER _____

APPLY IT Show your work

1 A game designer makes 9 prize bags. Each bag has 8 star stickers and 2 robot stickers. How many stickers does the designer use altogether?

WORK SPACE

ANSWER _____

2 At a school art fair, 5 tables each show 8 paintings and 6 clay animals. How many artworks are on the tables altogether?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find 8 x (9 + 5). Show two different ways to solve it.

WORK SPACE AND ANSWER

ANSWER KEY

Multiply Smart Moves

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	8 x 6 = 6 x __	**8**
2	Use grouping to solve: 2 x 5 x 9 = __	**90**
3	Use splitting to solve: 9 x (6 + 2) = __	**72**
4	8 x 6 = 8 x (5 + __)	**1**
5	Choose the expression equal to 5 x (8 x 6). A. (5 x 8) x 6 B. (5 x 6) + 8 C. 5 + (8 x 6)	**A. (5 x 8) x 6**
6	Use splitting to solve: 5 x (6 + 2) = __	**40**

PART 2 · APPLY IT

1. **90 stickers** Split each bag into 8 stickers and 2 stickers. 9 x 8 + 9 x 2 = 72 + 18 = 90.
2. **70 artworks** Each table has 8 + 6 artworks. 5 x (8 + 6) = 5 x 8 + 5 x 6 = 40 + 30 = 70.

CHALLENGE

112; 8 x 14 = 112, and (8 x 9) + (8 x 5) = 72 + 40 = 112.

Accept equivalent equations that correctly switch, regroup, or split factors. For the challenge, accept any two correct methods that both equal 112.