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3.OA.B.5: Apply properties of operations as strategies to multiply and divide.

Apply Associative Property of Multiplication to find the product of the following. Use parentheses.

1. $4 \times 2 \times 5$

2. $3 \times 6 \times 4$

3. $8 \times 2 \times 4$

4. $1 \times 9 \times 7$

5. $6 \times 2 \times 3$

6. $4 \times 4 \times 3$

Read and solve the word problems below.

7. A carpenter needs 5 boxes of nails. Each box has four rows. Each row has 5 nails. How many nails does the carpenter need?

Answer: _____

8. A market sells boxes of apples. A box has 2 rows of 8 apples. If an apple is 7¢, how much does 1 box of apples cost?

Answer: _____

9. Lyn multiplies $7 \times (3 \times 2)$ while Pat multiplies $(7 \times 3) \times 2$. Will they get the same product? Explain your answer.

Answer: _____

_____

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3.OA.B.5 Associative Property of Multiplication

Answer Key

3.OA.B.5: Apply properties of operations as strategies to multiply and divide.

Apply Associative Property of Multiplication to find the product of the following. Use parentheses.

1. $(4 \times 2) \times 5$

   40

2. $3 \times (6 \times 4)$

   72

3. $8 \times (2 \times 4)$

   64

4. $(1 \times 9) \times 7$

   63

5. $(6 \times 2) \times 3$

   36

6. $(4 \times 4) \times 3$

   48

Read and solve the word problems below.

7. A carpenter needs 5 boxes of nails. Each box has four rows. Each row has 5 nails. How many nails does the carpenter need?

Answer: 100

8. A market sells boxes of apples. A box has 2 rows of 8 apples. If an apple is 7¢, how much does 1 box of apples cost?

Answer: $1.12

9. Lyn multiplies $7 \times (3 \times 2)$ while Pat multiplies $(7 \times 3) \times 2$. Will they get the same product? Explain your answer.

Answer: Yes, they will both get the same answer. That is because, in associative property of multiplication, changing the grouping of factors will not affect the product.