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## 3.OA.B.5 Using Multiplication Properties in Problem Solving

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

Answer the question below.

1. Which property of multiplication is shown in this array?

Answer: $\qquad$


Find the missing factors.
2. $5 \times=4 \times 5$
4.

$$
\times 7=7 \times 2
$$

3. $7 \times(2 \times 3)=($ $\times 2) \times 3$
4. $3 \times(4 \times 5)=($ $\qquad$ $\times 4) \times 5$

Write the missing number and explain your answer.
6.

$$
\times 5=0
$$

Answer: $\qquad$

Use the pictograph to answer the questions below.
7. Ashley bought 2 paintbrushes. How much did she spend?

Answer: $\qquad$
8. Which costs more: 4 watercolors or 6 paintbrushes?

Answer: $\qquad$

| Art Materials |  |
| :--- | :--- |
| Paint Brush |  |
| Watercolor |  |
| Sketch Pad | Key: Each |
| $=\$ 1$ |  |

9. Margaret bought 3 sketch pads. Show how you can use the commutative property to find the total cost.

Answer: $\qquad$

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## 3.OA.B.5 Using Multiplication Properties in Problem Solving

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

Answer the question below.

1. Which property of multiplication is shown in this array?

Answer: $\qquad$ Commutative Property


Find the missing factors.
2. $5 \times 4=4 \times 5$
4. $2 \times 7=7 \times 2$
3. $7 \times(2 \times 3)=\left(\begin{array}{ll}7 & \times 2\end{array}\right) \times 3$
5. $3 \times(4 \times 5)=(3 \times 4) \times 5$

Write the missing number and explain your answer.
6. $0 \times 5=0$

Answer: Zero Property of Multiplication states that the product of zero and any number equals 0 .

Use the pictograph to answer the questions below.
7. Ashley bought 2 paintbrushes. How much did she spend?

Answer: \$2
8. Which costs more: 4 watercolors or 6 paintbrushes?

Answer: 4 watercolors

9. Margaret bought 3 sketch pads. Show how you can use the commutative property to find the total cost.

Answer:

$$
3 \text { sketch pads } \times \$ 4=\$ 12 \text { and } \$ 4 \times 3 \text { sketch pads }=\$ 12
$$

