Notes 1.6
Commutative & Associative Properties
1. Commutative Property

- The order in which you add or multiply numbers does not change their sum or product.
- \( a + b = b + a \)
- Example: \( 7 + 2 = 2 + 7 \)
- \( ab = ba \)
- Example: \( 3 \times 2 = 2 \times 3 \)
2. Associative Property

- **Definition** – The way you group three or more numbers when adding or multiplying does not change their sum or product.

- \((a + b) + c = a + (b + c)\)
- **Example**: \(2 + (3 + 4) = (2 + 3) + 4\)
- \((ab)c = a(bc)\)
- \((5 \cdot 3)4 = 5(3 \cdot 4)\)
Question 1

- What property is shown here?
  \[ 34 + 27 = 27 + 34 \]

A. Commutative Property of Addition
B. Commutative Property of Multiplication
C. Associative Property of Addition
D. Associative Property of Multiplication
Question 2

- What property is shown here?
  \[ 48 + (73 + 16) = (48 + 73) + 16 \]

A. Commutative Property of Addition
B. Commutative Property of Multiplication
C. Associative Property of Addition
D. Associative Property of Multiplication
Question 3

What property is shown here?

\[18 \times (22 \times 49) = (18 \times 22) \times 49\]

A. Commutative Property of Addition
B. Commutative Property of Multiplication
C. Associative Property of Addition
D. Associative Property of Multiplication

D. Associative Property of Multiplication
Question 4

What property is shown here?

$66 \times 37 = 37 \times 66$

A. Commutative Property of Addition

✓ B. Commutative Property of Multiplication

C. Associative Property of Addition

D. Associative Property of Multiplication
Question 5

Which shows the Commutative Property of Addition?

A. $7+2+3=3+7+8$
B. $7+(2+3)=(2+2)+7$
C. $7+2+3=2+3+7$
D. $7+2+3=5+7+2$
Question 6

Which shows the Associative Property of Multiplication?

A. \((6 \times 5) \times 2 = 6 \times (5 \times 2)\)
B. \(6 \times 5 \times 2 = 5 \times 6 \times 2\)
C. \(5 \times (6 \times 2) = 5 \times (6 \times 2)\)
D. \(5 \times 6 \times 2 = 6 \times 10\)
Question 7

Which shows the Commutative Property of Multiplication?

A. $7 \times 8 \times 4 = 7 \times 16 \times 2$
B. $(7 \times 8) \times 4 = 7 \times (2 \times 16)$
C. $7 \times 8 \times 4 = 8 \times 4 \times 7$
D. $7 \times (8 \times 4) = (7 \times 8) \times 4$
Question 8

Which shows the Associative Property of Addition?

A. $6 + 9 + 12 = 12 + 6 + 9$

$\checkmark$ B. $6 + (9 + 12) = (6 + 9) + 12$

C. $6 + 9 + 12 = 15 + 12$

D. $6 + (9 + 12) = (9 + 12) + 6$
Which is the best answer for:

$$62 + (13 + 4) = \underline{\hspace{2cm}}$$

A. 82  
B. 79  
C. 74  
D. 88
Question 10

Which is the best answer for:

$$43 \times (2 \times 5) = \_\_\_\_\_$$

A. 86
B. 345
C. 430
D. 215

C. 430