

**Topic:** Associative property**Question:** Which of these is the associative property?**Answer choices:**

A  $(a + b) + c = a + (b + c)$

B  $a + b + c = a + c + b$

C  $a + b + c = b + a + c$

D  $a(b + c) = ab + ac$



**Solution: A**

$$(a + b) + c = a + (b + c)$$

**Associative property**

$$a + b + c = a + c + b$$

**Commutative property**

$$a + b + c = b + a + c$$

**Commutative property**

$$a(b + c) = ab + ac$$

**Distributive property**

**Topic:** Associative property**Question:** The associative property tells you that:**Answer choices:**

A  $(4 + 3) + 2 = 4 + (3 + 2)$

B  $4 + 3 + 2 = 4 + 2 + 3$

C  $4 + 3 + 2 = 3 + 4 + 2$

D  $4(3 + 2) = (4)(3) + (4)(2)$



**Solution: A**

Answer choices B and C illustrate the commutative property, and answer choice D illustrates the distributive property.

Answer choice A illustrates the associative property, which tells us that, when we're doing addition, we can group terms together in any order we'd like, and the answer will still be the same.



**Topic:** Associative property

**Question:** Which equation shows the associative property for addition?

**Answer choices:**

- A  $(x + y) + 2z = x + y + 2z$
- B  $x + (y + 2z) = (x + (y + 2z))$
- C  $x + y + 2z = (x + 2z + y)$
- D  $x + (y + 2z) = (x + y) + 2z$



**Solution: D**

The associative property has to do with different ways of grouping terms

Answer choice A shows no grouping on the right, so rule out A.

Answer choice B shows a parenthesis error on the right side: two left parentheses, but only one right parenthesis. Rule out B.

Answer choice C shows no grouping on the left. Also,  $y$  and  $2z$  are in a different order on the right. Rule out C.

Answer choice D correctly shows grouping one pair of terms,  $(y + 2z)$ , on the left and a different pair of terms,  $(x + y)$ , on the right.

