

Topic: Distributive property**Question:** Which of these represents the distributive property?**Answer choices:**

- A $3(x + b) = 3x + b$
- B $3(x + b) = 3x + 3b$
- C $3(x + b) = 3 + x + b$
- D $3(x + b) = x + 3b$



Solution: B

The distributive property tells us to multiply the factor outside the parentheses (the number 3) by each of the terms inside the parentheses.

$$3(x + b)$$

$$3(x) + 3(b)$$

$$3x + 3b$$



Topic: Distributive property

Question: Use the distributive property to expand the expression.

$$\frac{1}{2}(4x + 4)$$

Answer choices:

A $2x + 2$

B $4x + 4$

C $2x$

D $2 + x$



Solution: A

The distributive property tells us to multiply the factor outside the parentheses (the number $\frac{1}{2}$) by each of the terms inside the parentheses.

$$\frac{1}{2}(4x + 4)$$

$$\frac{1}{2}(4x) + \frac{1}{2}(4)$$

$$2x + 2$$



Topic: Distributive property

Question: Use the distributive property to expand the expression.

$$2x(3 + x^2)$$

Answer choices:

- A 8
- B $8x$
- C $6x + 2x$
- D $6x + 2x^3$



Solution: D

The distributive property tells us to multiply the value outside the parentheses by each of the terms inside the parentheses.

$$2x(3 + x^2)$$

$$2x(3) + 2x(x^2)$$

$$6x + 2x^3$$

