**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 $1/2$) by each of the terms inside the parentheses.

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

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

$$\frac{4x}{2}+\frac{4}{2}$$

$$2x+2$$

**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, $2x$, by each of the terms inside the parentheses.

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

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

$$6x + 2x^3$$