Sample - Quantitative Comparison

Directions: Compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given, and select one of the following four answer choices.

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.
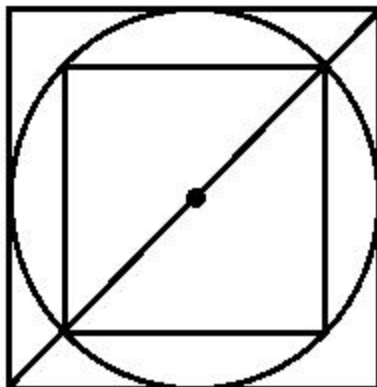
1. $x < 3$

Quantity A	Quantity B
$x(x + 3)$	$x(x - 3)$

Solution: D

Rationale: The results of the comparison vary based upon the value of x. When $x < 0$, Quantity B is greater. When $x = 0$, the two quantities are equal. When $0 < x < 3$, Quantity A is greater.

Sample - Multiple Choice

The figure shows two cubes and a circle. What is the ratio of the area of the larger cube to the area of the smaller cube?

A. $\sqrt{2} : 1$

B. $\sqrt{3} : 1$

C. $2 : 1$

D. $3 : 1$

Solution: C

Rationales:
A. This value is the ratio of side lengths of the cubes instead of the ratio of areas of the cubes.
B. This value was obtained by confusing the rules for 30-60-90 triangles with the rules for 45-45-90 triangles, as well as determining the ratios of the side lengths of the cubes rather than the ratio of the areas of the cubes.
C. Correct. The ratio of side lengths is $\sqrt{2} : 1$. To obtain the ratio of areas of the cubes, this quantity is squared to get 2:1.
D. This value was obtained by confusing the rules for 30-60-90 triangles with the rules for 45-45-90 triangles.

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