NAME:_____

P.I. A.G.2: Use formulas to calculate surface area of rectangular solids

1. A rectangular prism is 6 cm long, 2 cm wide, and 9 cm high. Find the surface area of the prism.

   [A] 168 cm^2 [B] 34 cm^2 [C] 108 cm^2 [D] 17 cm^2

2. A rectangular prism is 7 cm long, 5 cm wide, and 4 cm high. Find the surface area of the prism.

   [A] 166 cm^2 [B] 32 cm^2 [C] 140 cm^2 [D] 16 cm^2

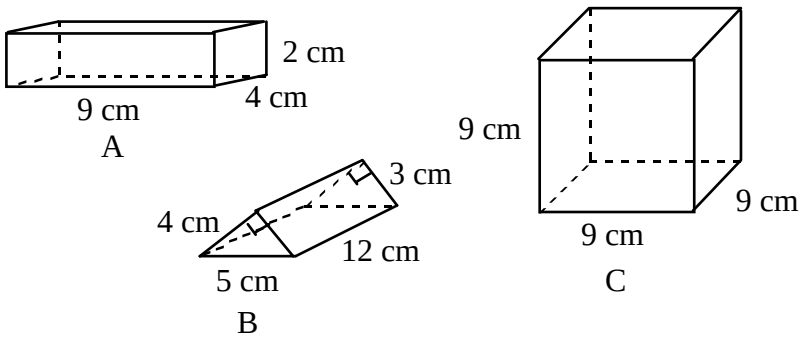
3. The design for a rectangular box has width x, length $2x$, and height 3 in. Compare the surface area of the box to its volume. Write your answer as a rational expression.

4. Rhonda is building a cube with no top to hold magazines. Each side is square 18 in. by 18 in. She wants to cover all sides, inside and out, with fabric. How many square yards will she need?

5. When you quadruple the dimensions of a rectangular prism, its surface area

   [A] becomes 16 times greater. [B] becomes 64 times greater.

   [C] is $\frac{1}{8}$ of the original figure. [D] is none of these.

6. 

   The surface area of Prism C above is _____ the surface area of Prism A.

   [A] less than half [B] greater than half [C] equal to [D] half

[1] A

[2] A

[3] $\frac{2x+9}{3x}$

[4] 2.5 yd^2

[5] A

[6] B