

**PROBLEM-OF-THE-DAY: ALGEBRA 1****WEEK:** October 22 to October 26**DAY:** Wednesday

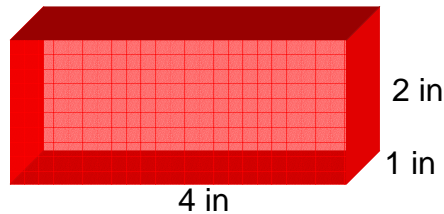
**RISD Objective:** Given a solid figure (including composite figures) and/or a word problem, students will find the surface area, applying it as necessary.

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**PROBLEM #46**

**Describe the effect on the surface area if the measurements of the width, height, and length of the given right rectangular prism are tripled.**

$$SA = Ph + 2B$$



**MODEL SOLUTION #46****Original Dimensions**

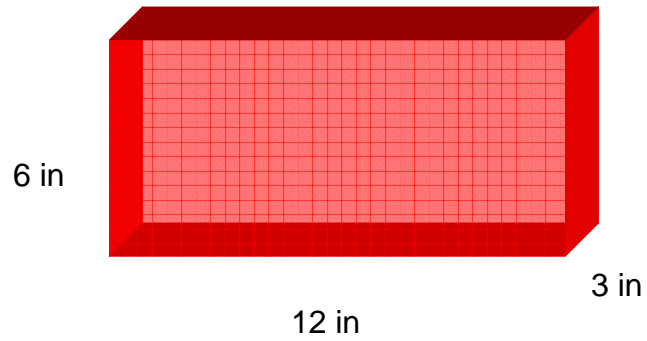
$$SA = (10)(2) + 2(4)$$

$$SA = 20 + 8$$

$$SA = 28in^2$$

**Dimensions are tripled****New Dimensions:**

$$L = 3(4) = 12; W = 3(1) = 3; H = 3(2) = 6$$



$$SA = (30)(6) + 2(36)$$

$$SA = 180 + 72$$

$$SA = 252in^2$$

**Note that  $252 = 9(28)$ . If the dimensions are tripled, the new surface area is multiplied by 9 or  $3^2$ .**