

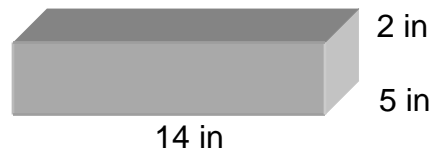
**PROBLEM-OF-THE-DAY: ALGEBRA 1****WEEK:** October 22 to October 26**DAY:** Friday

**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 #48**

Isabel is baking a rectangular chocolate icing cake with dimensions of 14 in, 5 in, and 2 in. The chocolate icing cost \$0.02 per square inch. How much would it cost Isabel to put icing over all the cake with the exception of the bottom?



## MODEL SOLUTION #48

First, we need to find the surface area of the cake, excluding the bottom.

SA of Cake

$$\text{Top: } (14)(5) = 70$$

$$\text{Front: } (14)(2) = 28$$

$$\text{Back: } (14)(2) = 28$$

$$\text{Left: } (5)(2) = 10$$

$$\text{Right: } (5)(2) = \underline{10}$$

$$\text{Total} = 146 \text{ in}^2$$

Now, to find the price of the chocolate icing we need to multiply total square inches by the cost per square inch.

$$\text{Chocolate icing} = (0.02)(146)$$

$$\text{Chocolate icing} = \$2.92$$

It will cost Isabel \$2.92 to put chocolate icing over her cake.