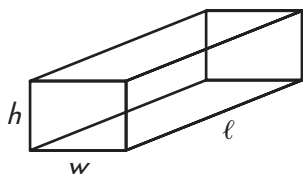


Lesson 6.6 Surface Area: Rectangular Solids

The **surface area** of a solid is the sum of the areas of all surfaces of the solid. A rectangular solid has 6 surfaces.

The area of each surface is determined by finding:



length \times width, length \times height, width \times height

The total surface area is found using this formula:

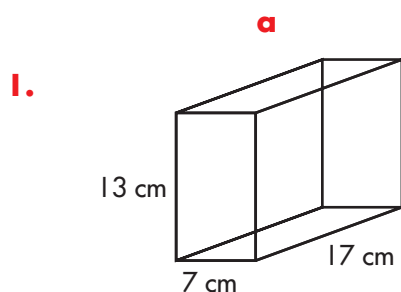
$$SA = 2\ell w + 2\ell h + 2wh$$

If $\ell = 10$ m, $w = 6$ m, and $h = 4$ m, the surface area is found as follows:

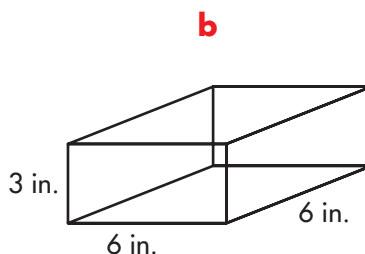
$$SA = 2(10 \times 6) + 2(10 \times 4) + 2(6 \times 4)$$

$$SA = 2(60) + 2(40) + 2(24) = 120 + 80 + 48 = 248 \text{ m}^2$$

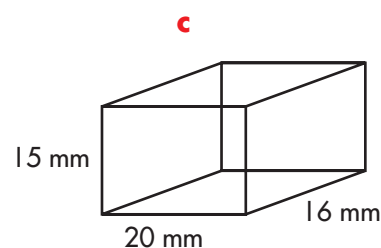
Find the surface area of each rectangular solid.



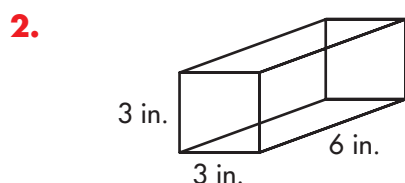
$$SA = \underline{\hspace{2cm}} \text{ cm}^2$$



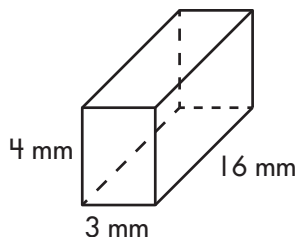
$$SA = \underline{\hspace{2cm}} \text{ in.}^2$$



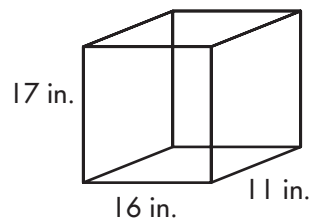
$$SA = \underline{\hspace{2cm}} \text{ mm}^2$$



$$SA = \underline{\hspace{2cm}} \text{ in.}^2$$



$$SA = \underline{\hspace{2cm}} \text{ ft.}^2$$



$$SA = \underline{\hspace{2cm}} \text{ in.}^2$$