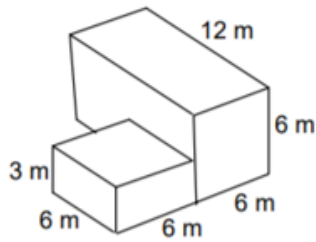


Warm-Up

November 18, 2019

Find the surface area.



Big

small

FRONT/Back

Top/Bottom

Sides

$$\begin{array}{c}
 \boxed{3 \times 2} \\
 \hline
 6 \\
 A = bh \\
 = 3 \times 6 \\
 = 18 \\
 \times 2 \\
 \hline
 36 \text{ m}^2
 \end{array}$$

$$\begin{array}{c}
 \boxed{x2} \ 6 \\
 \hline
 6 \\
 A = bh \\
 = 6 \times 6 \\
 = 36 \\
 \times 2 \\
 \hline
 72 \text{ m}^2
 \end{array}$$

$$\begin{array}{c}
 \boxed{6 \times 2} \\
 \hline
 3 \\
 A = bh \\
 = 3 \times 6 \\
 = 18 \\
 \times 2 \\
 \hline
 36 \text{ m}^2
 \end{array}$$

← one face

TSA small: 144

$$\begin{array}{c}
 \boxed{F/B} \\
 \boxed{12 \times 6} \\
 \hline
 12 \\
 A = bh \\
 = 12 \times 6 \\
 = 72 \\
 \times 2 \\
 \hline
 144 \text{ m}^2
 \end{array}$$

$$\begin{array}{c}
 \boxed{T/B} \\
 \boxed{12 \times 6} \\
 \hline
 12 \\
 A = bh \\
 = 12 \times 6 \\
 = 72 \\
 \times 2 \\
 \hline
 144 \text{ m}^2
 \end{array}$$

$$\begin{array}{c}
 \boxed{\text{sides}} \\
 \boxed{6 \times 6} \\
 \hline
 6 \\
 A = bh \\
 = 6 \times 6 \\
 = 36 \\
 \times 2 \\
 \hline
 72 \text{ m}^2
 \end{array}$$

$$144 \text{ m}^2 + 144 \text{ m}^2 + 72 \text{ m}^2 = \text{TSA big} = 360$$

← connection

TSA: SA small + SA Big - faces lost

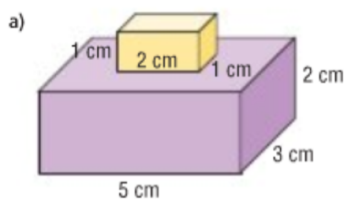
$$144 + 360 - 36$$

$$468 \text{ m}^2$$

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8. Determine the surface area of each composite object.
 What effect does the overlap have on the calculation of the surface area?

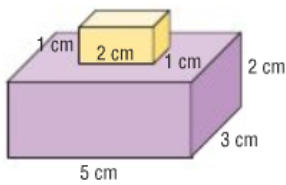
SA of small



SA of Big

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8. Determine the surface area of each composite object.
What effect does the overlap have on the calculation of the surface area?



Small Rectangular Prism

$\begin{array}{c} \text{T/B} \\ \boxed{\times 2} \\ 2 \end{array}$ $A = bh$ $= 2 \times 1$ $= 2$ $\frac{2}{4}$	$\begin{array}{c} \text{F/B} \\ \boxed{\times 2} \\ 2 \end{array}$ $A = bh$ $= 2 \times 1$ $= 2$ $\frac{2}{4}$	$\begin{array}{c} \text{sides} \\ \boxed{\times 2} \\ 1 \end{array}$ $A = bh$ $= 1 \times 1$ $= 1$ $\frac{1}{2}$
$+ \quad + \quad +$		
$TSA = 10 \text{ cm}^2$		

Big Rectangular Prism

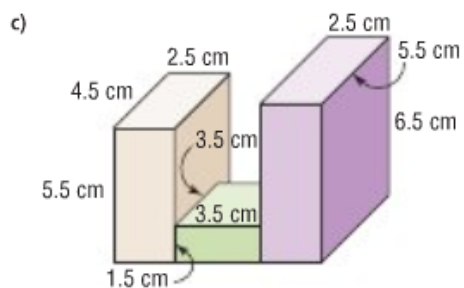
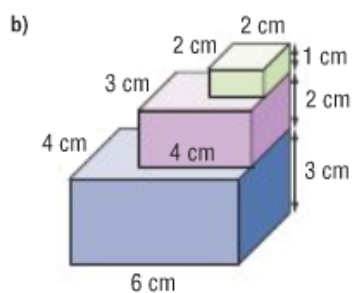
$\begin{array}{c} \text{T/B} \\ \boxed{\times 2} \\ 5 \end{array}$ $A = bh$ $= 5 \times 3$ $= 15$ $\frac{15}{30}$	$\begin{array}{c} \text{F/B} \\ \boxed{\times 2} \\ 5 \end{array}$ $A = bh$ $= 5 \times 2$ $= 10$ $\frac{10}{20}$	$\begin{array}{c} \text{sides} \\ \boxed{\times 2} \\ 3 \end{array}$ $P = bh$ $= 3 \times 2$ $= 6$ $\frac{6}{12}$
$+ \quad + \quad +$		
$TSA = 62 \text{ cm}^2$		

faces lost

TSA small + TSA big - connections

$$10 + 62 - 4 = 68 \text{ cm}^2$$

8.a)



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#8 b, c