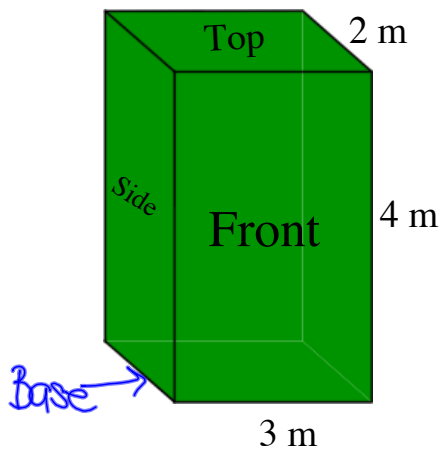


8th Grade Lesson 49

- I can determine the surface area of a right solid.

The **surface area** of a solid is the total area of all the exposed surfaces of the solid.

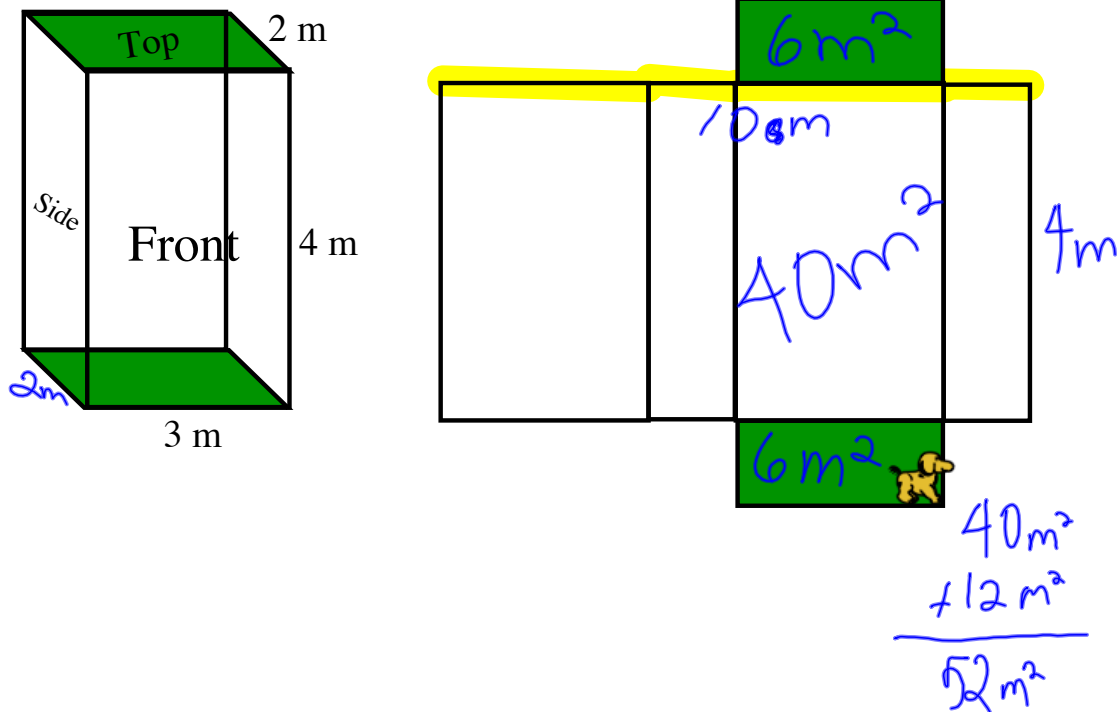


$$\begin{aligned}
 \text{Area of front} &= 3\text{m} \cdot 4\text{m} = 12\text{m}^2 \\
 \text{Area of back} &= 3\text{m} \cdot 4\text{m} = 12\text{m}^2 \\
 \text{Area of side} &= 2\text{m} \cdot 4\text{m} = 8\text{m}^2 \\
 \text{Area of side} &= 2\text{m} \cdot 4\text{m} = 8\text{m}^2 \\
 \text{Area of top} &= 3\text{m} \cdot 2\text{m} = 6\text{m}^2 \\
 \text{Area of bottom} &= 3\text{m} \cdot 2\text{m} = 6\text{m}^2 \\
 &\quad \text{base}
 \end{aligned}$$

$$52\text{m}^2$$

Lateral Surface Area = Perimeter of the base \times Height of the solid

$$L.A. = ph$$



Surface Area of a Right Solid = $2(\text{Area of the Base}) + \text{Lateral Surface Area}$

Formulas

S.A. = total surface area

L.A. = lateral surface area

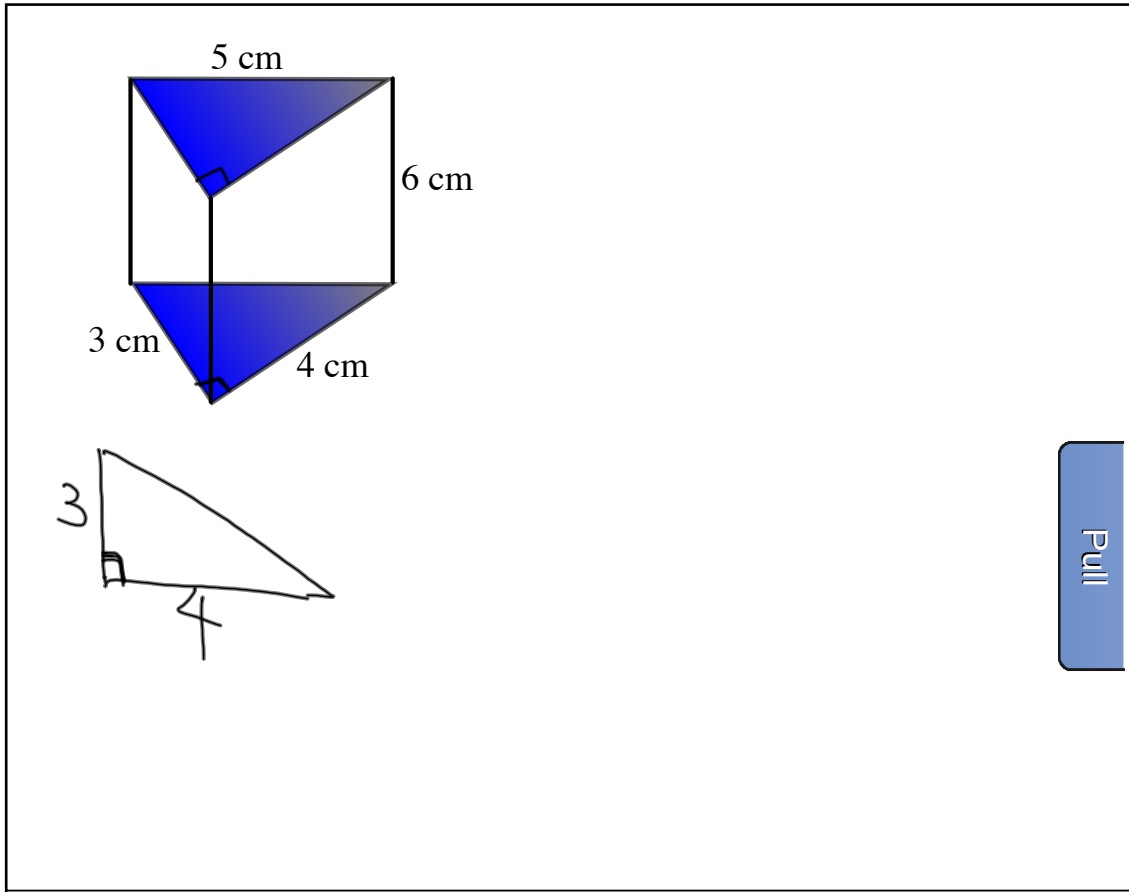
p = perimeter of the base

h = height of the solid

B = area of the base

$$L.A. = ph$$

$$S.A. = L.A. + 2B$$



$p = 12 \text{ cm}$
 $h = 6 \text{ cm}$
 $B = 6 \text{ cm}^2$

$L.A. = 72 \text{ cm}^2$

$S.A. = 72 \text{ cm}^2 + 12 \text{ cm}^2$
 $= 84 \text{ cm}^2$

$L.A. = ph$
 $S.A. = L.A. + 2B$

Assignment:

Problem Set 49