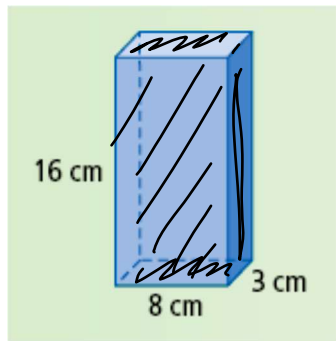
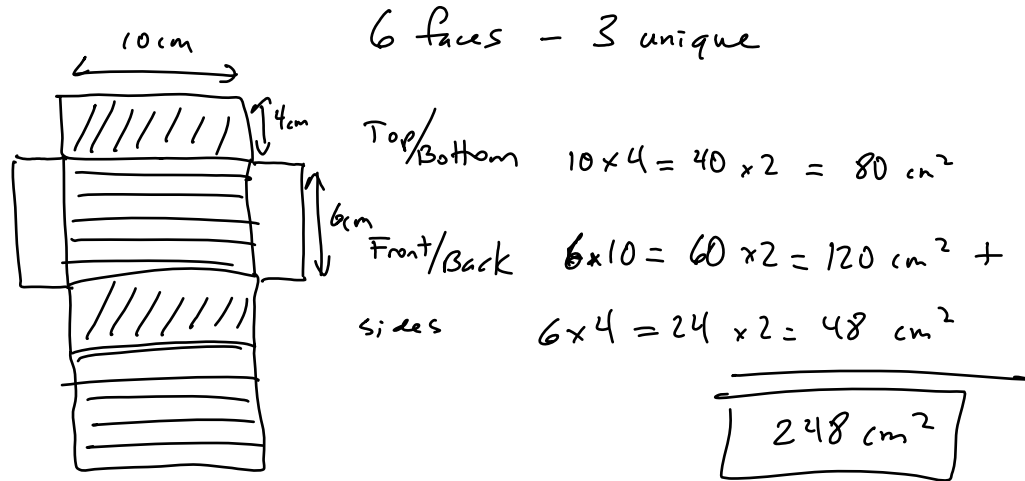
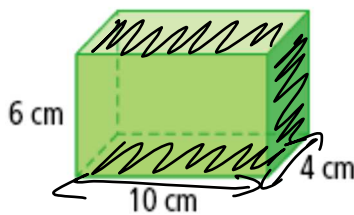


2.3A Surface Area of a Prism

- Surface Area:**
- number of square units needed to cover a 3D object
 - the area of the "net" of the 3D object
 - the sum of the areas of all the faces of the object

Example 1: Surface Area of a Rectangular Prism

Calculate the surface area.



Front/Back: $\underline{16 \times 8 = 128 \times 2 = 256 \text{ cm}^2}$

Top/Bottom: $\underline{8 \times 3 = 24 \times 2 = 48 \text{ cm}^2} +$

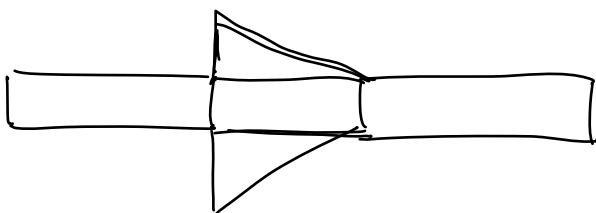
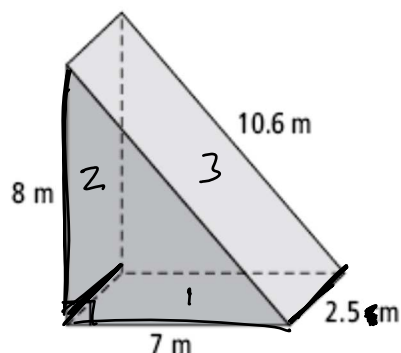
Sides: $\underline{3 \times 16 = 48 \times 2 = 96 \text{ cm}^2}$

400 cm²

Example 2: Surface Area of a Triangular Prism

Calculate the surface area.

5 faces: 2 = $\triangle$'s & 3 different $\square$'s



Triangles

$b \times h \div 2$

Rectangles

$\square_1$

$\square_2$

$\square_3$

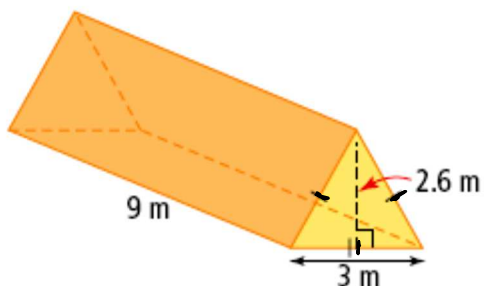
$$7 \times 8 \div 2 = 28 \times 2 = 56 \text{ m}^2$$

$$7 \times 2.5 = 17.5 \text{ m}^2$$

$$8 \times 2.5 = 20 \text{ m}^2$$

$$10.6 \times 2.5 = 26.5 \text{ m}^2$$

$$120 \text{ m}^2$$



5 faces: 2 = $\triangle$'s & 3 = $\square$'s

$$\triangle\text{'s} \quad 3 \times 2.6 \div 2 = 3.9 \times 2 = 7.8 \text{ m}^2$$

$$\square\text{'s} \quad 3 \times 9 = 27 \times 3 = 81 \text{ m}^2$$

$$88.8 \text{ m}^2$$