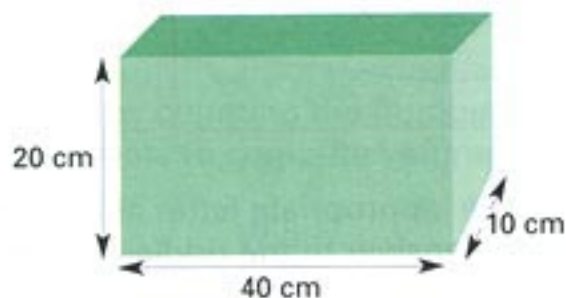


## Surface Area

The surface area of a 3-dimensional figure is the combined area of all the faces. If we wanted to know how much cardboard it would take to make a box or how much fabric we would need to cover a box, we would need to know the surface area.

**FRONT**

$$20 \text{ cm} \times 40 \text{ cm} = 800 \text{ cm}^2$$

**TOP**

$$40 \text{ cm} \times 10 \text{ cm} = 400 \text{ cm}^2$$

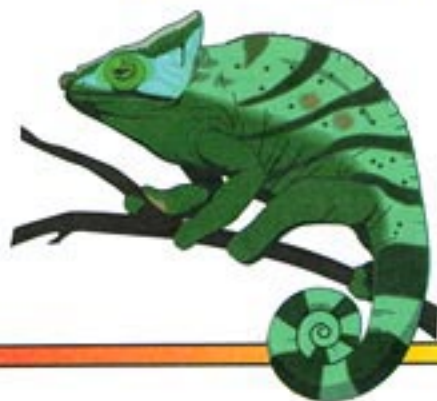
**SIDE**

$$20 \text{ cm} \times 10 \text{ cm} = 200 \text{ cm}^2$$

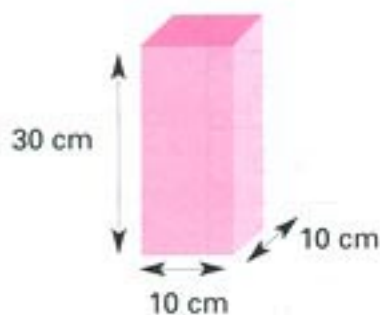
Each face has a congruent face opposite it, so we will multiply each part of the figure by 2.

Front	$800 \text{ cm}^2 \times 2 =$	$1,600 \text{ cm}^2$
Top	$400 \text{ cm}^2 \times 2 =$	$800 \text{ cm}^2$
Side	$200 \text{ cm}^2 \times 2 =$	$400 \text{ cm}^2$
<b>Add to find total</b>		<b><math>2,800 \text{ cm}^2</math></b>

The surface area of the box is  $2,800 \text{ cm}^2$



- 1 Find the surface area of the two boxes.

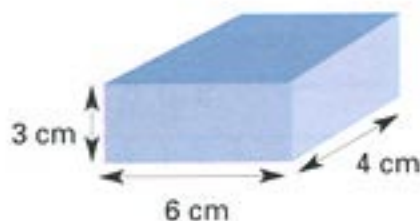


**Front**  $30 \text{ cm} \times 10 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Top**  $10 \text{ cm} \times 10 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Side**  $30 \text{ cm} \times 10 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Total**  $\underline{\hspace{2cm}}$



**Front**  $3 \text{ cm} \times 6 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Top**  $6 \text{ cm} \times 4 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Side**  $3 \text{ cm} \times 4 \text{ cm} = \underline{\hspace{2cm}} \times 2 = \underline{\hspace{2cm}}$

**Total**  $\underline{\hspace{2cm}}$