

## What's Going On?

**Checking In**

**Minds on**

What's the Area?

**Action!**

Composite Shapes and Net Area

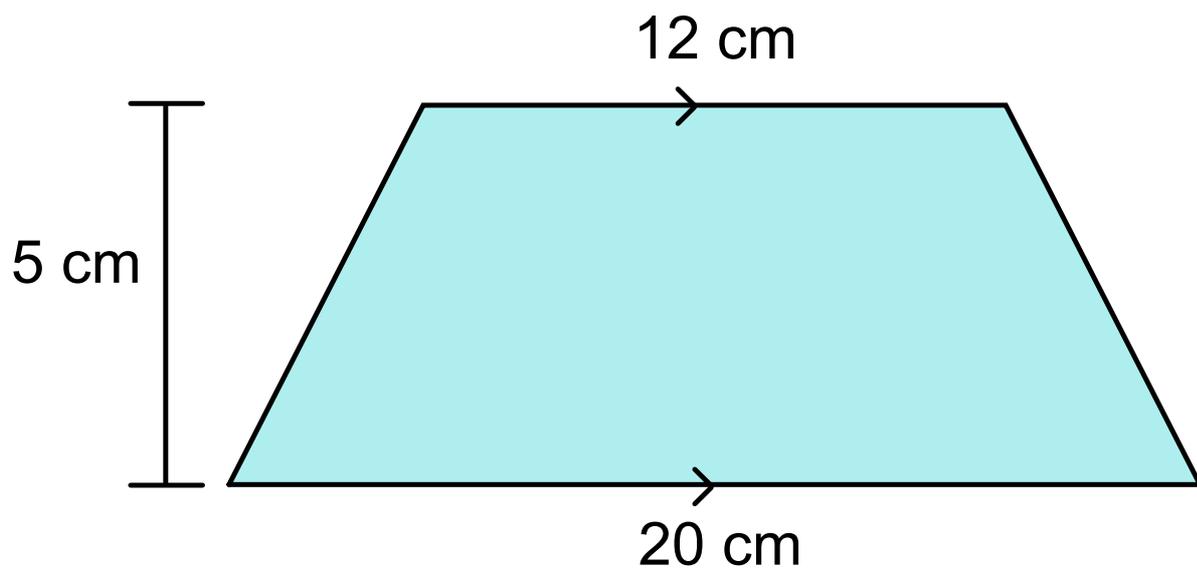
**Consolidation**

What's the Area?

**Learning Goal - I will be able to calculate the area of composite figures.**

**Minds on**

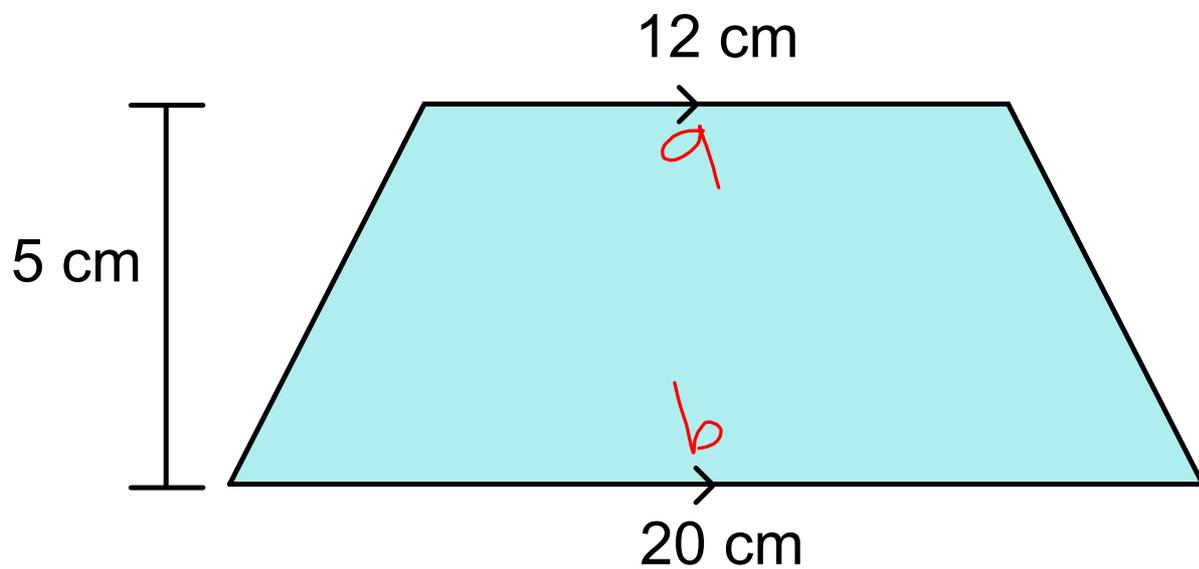
What's the Area?



**Copy the diagram and determine the area.**

**Minds on**

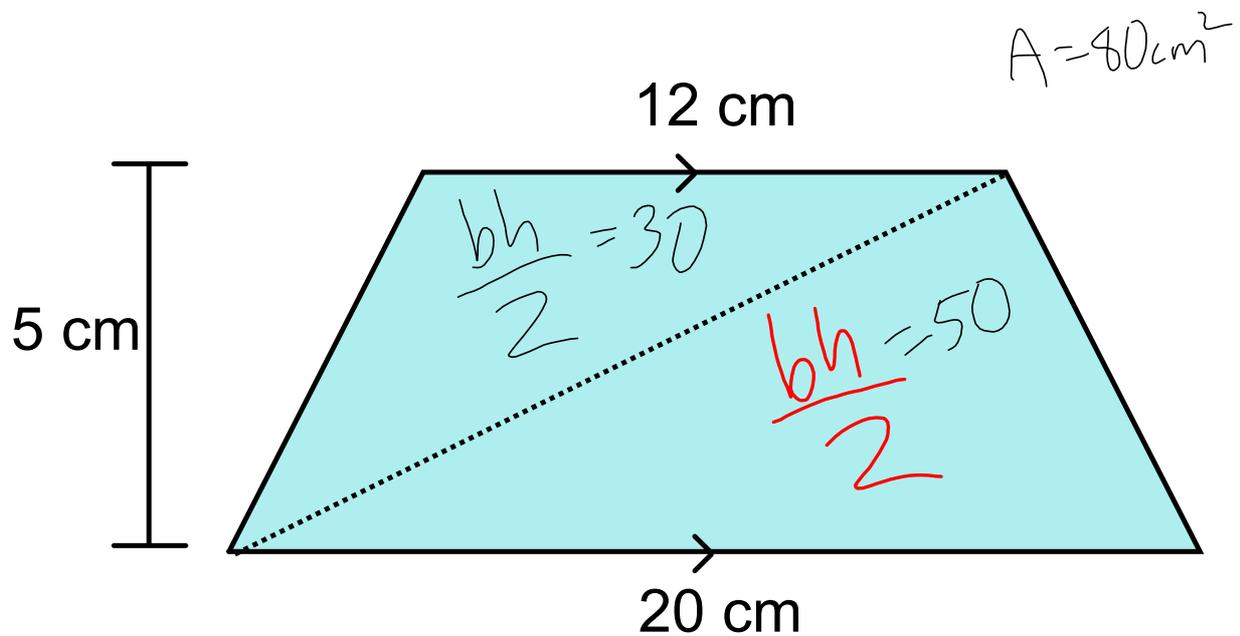
# What's the Area?



$$A = \frac{(a+b)h}{2}$$

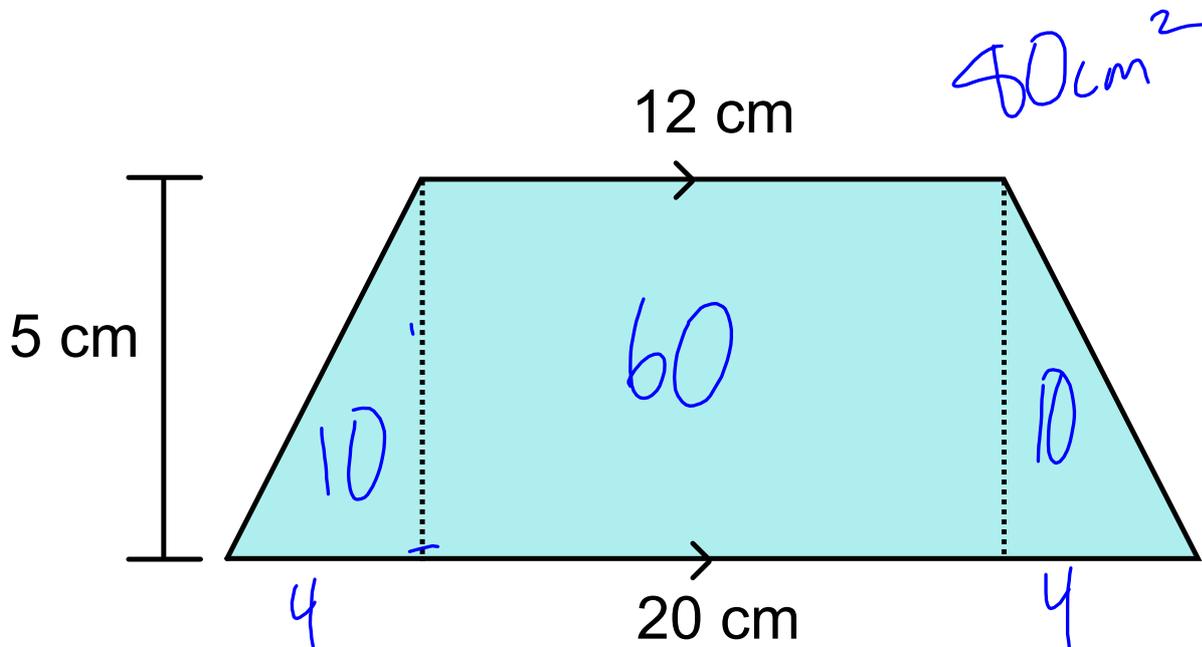
**Minds on**

# What's the Area?



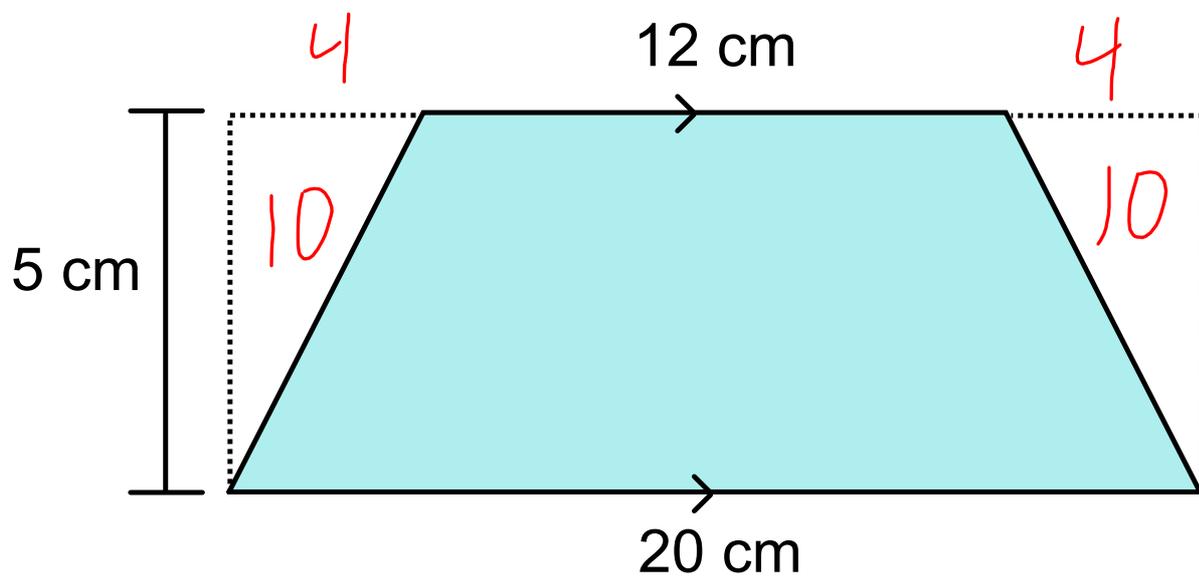
**Minds on**

What's the Area?



**Minds on**

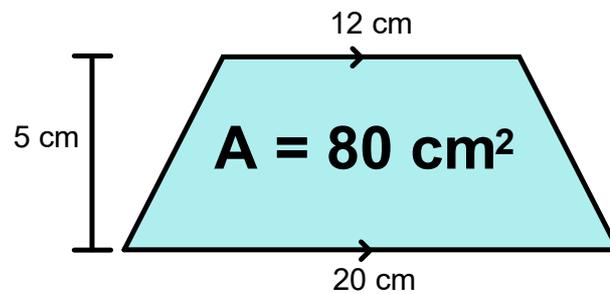
# What's the Area?



$$100 - 20 = 80 \text{ cm}^2$$

**Minds on**

# What's the Area?



Convert the area to square inches.

**Hint: 1 inch = 2.54 cm**

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Convert 12.5 cm into inches

$$\frac{1 \text{ inch}}{2.54 \text{ cm}} = \frac{x}{12.5 \text{ cm}}$$

$$\frac{12.5}{2.54} = \frac{2.54x}{2.54}$$

$$x = 4.9 \text{ in.}$$

$$1 \text{ foot} = 30.48 \text{ cm}$$

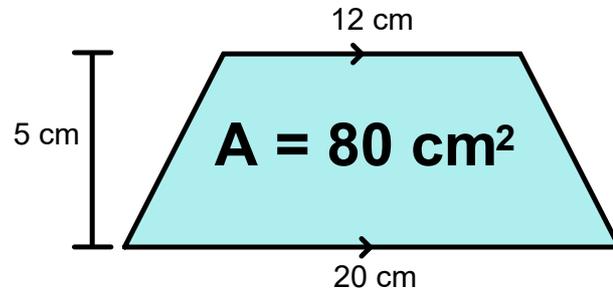
Convert 63cm to feet

$$\frac{1 \text{ ft.}}{30.48 \text{ cm}} = \frac{x}{63 \text{ cm}}$$

$$x = 2.1 \text{ ft.}$$

## Minds on

### What's the Area?



Convert the area to square inches.

Hint:  $(1 \text{ inch})^2 = (2.54 \text{ cm})^2$

$$1 \text{ in.}^2 = 6.45 \text{ cm}^2$$

$$\frac{1 \text{ in}^2}{6.45 \text{ cm}^2} = \frac{x}{80 \text{ cm}^2}$$

$$80 = \frac{6.45x}{6.45}$$

$$x = 12.4 \text{ in}^2$$

**Minds on**

## Converting Areas

$$1 \text{ cm} = 10 \text{ mm}$$

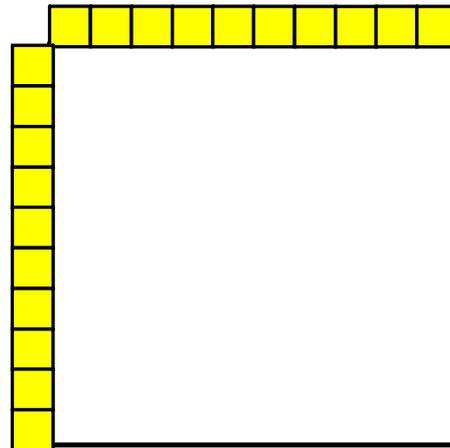


$$1 \text{ cm}^2 = \underline{100} \text{ mm}^2$$

To convert areas

Square

the measurements!



**Minds on**

# Converting Volumes

$$1 \text{ cm} = 10 \text{ mm}$$

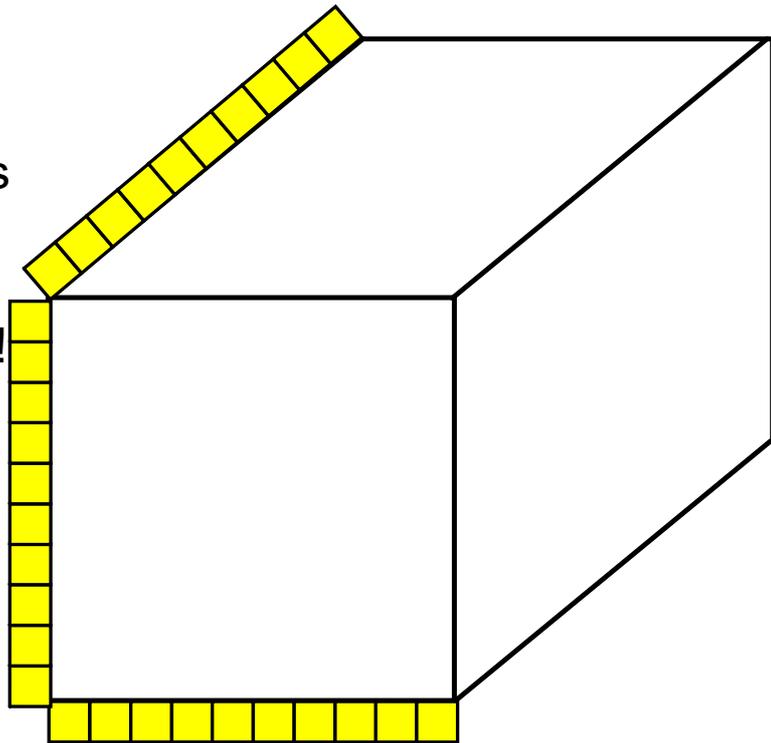


$$1 \text{ cm}^3 = \underline{1000} \text{ mm}^3$$

To convert volumes

cube

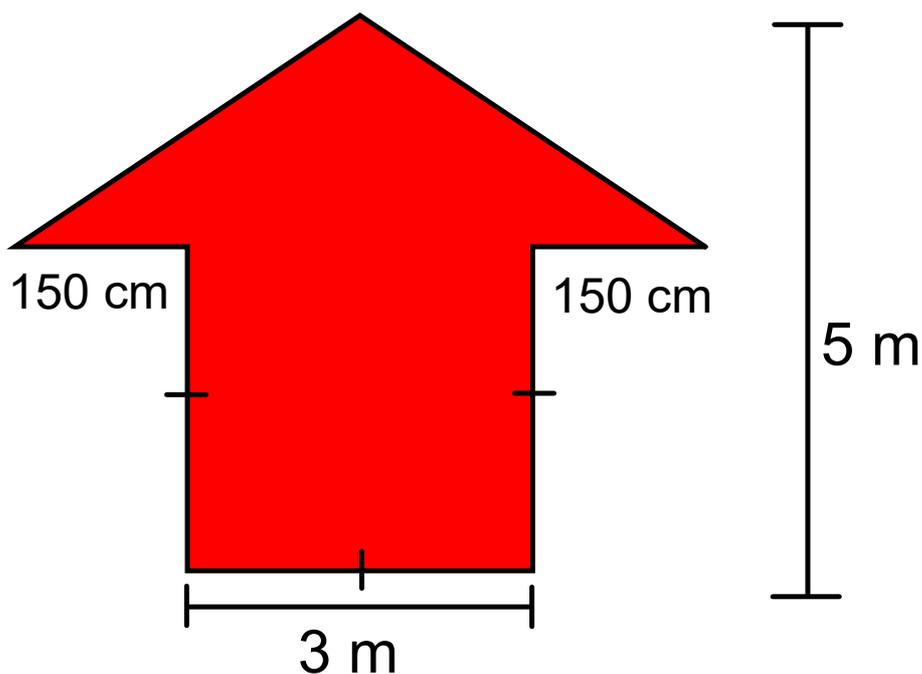
the measurements!

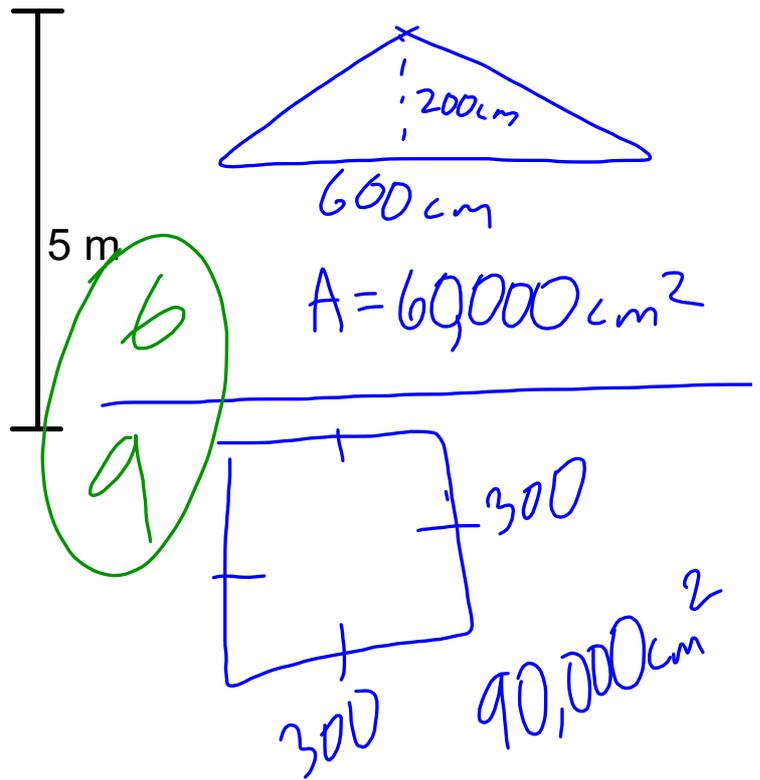
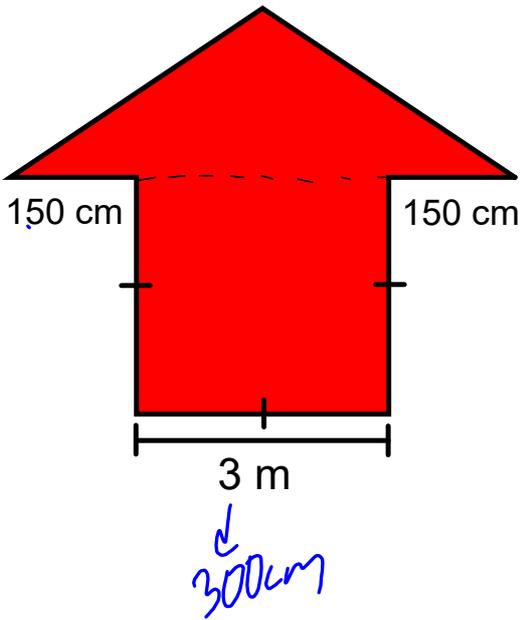


**Action!**

## Composite Shapes

A composite shape is an object made up of two or more simple shapes.





$$A = 150,000 \text{ cm}^2$$

**Action!**

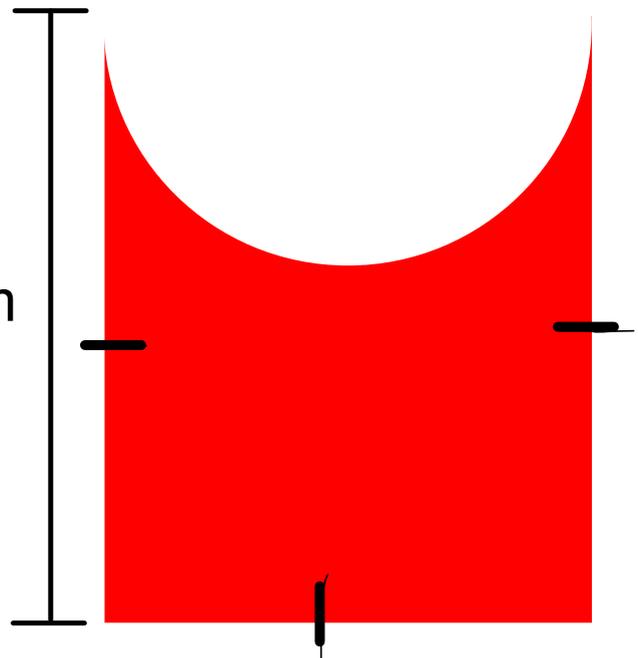
## Net Area

The "net area" of an object is the area found by subtracting one or more areas from a total area.  
(think "net income")

**Determine the net area of the object on the right.**

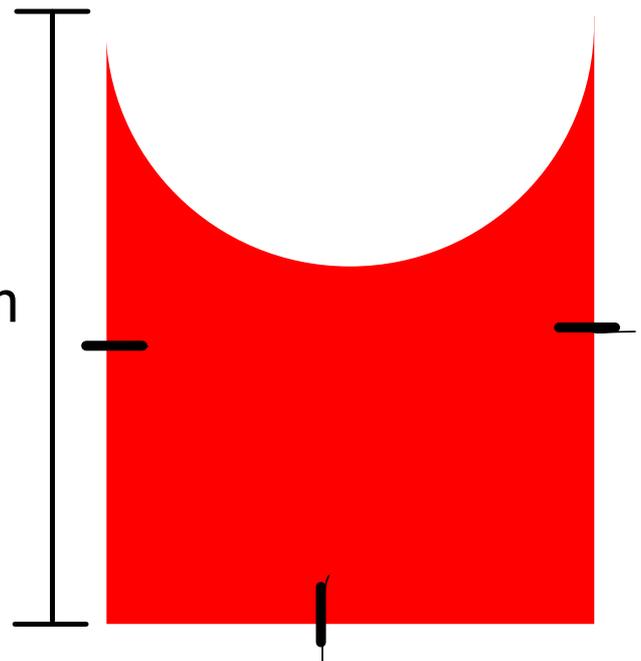
$$A_{\text{circle}} = \pi r^2$$

11.5 m



$$A_{\text{circle}} = \pi r^2$$

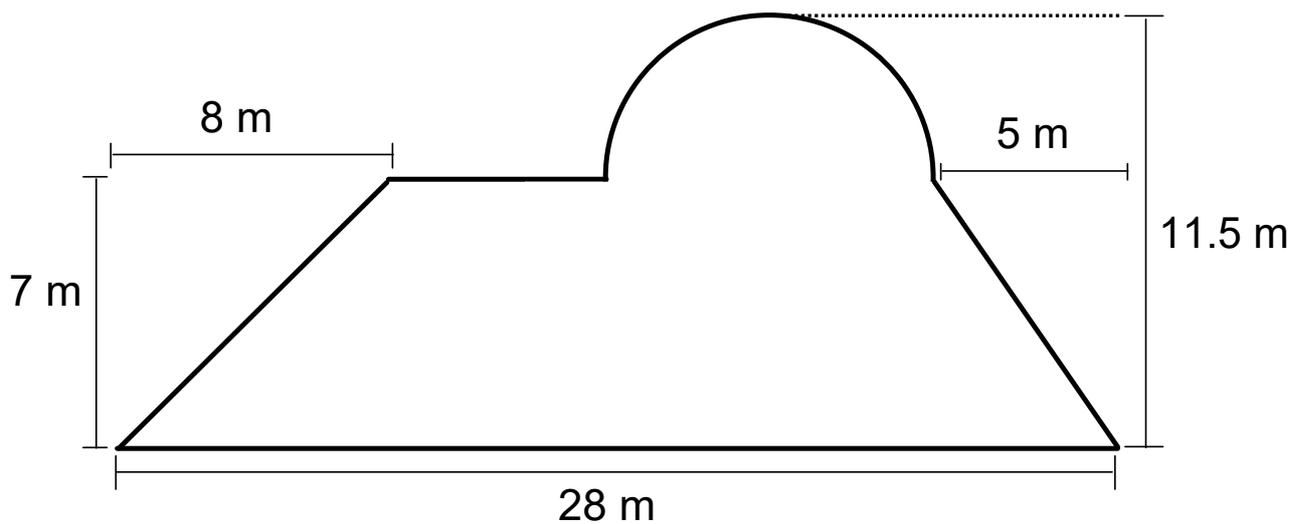
$$r = 5.75$$



$$\begin{aligned} \text{Area} &= A_{\text{square}} - A_{\text{semi-circle}} \\ &= 11.5^2 - \frac{\pi (5.75)^2}{2} \\ &= 132.25 - 51.9 \\ &= 80.35 \text{ m}^2 \end{aligned}$$

## Consolidation

### Area of Composite Figures



**Consolidation**

# Homework

Pg. 11 - 13

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