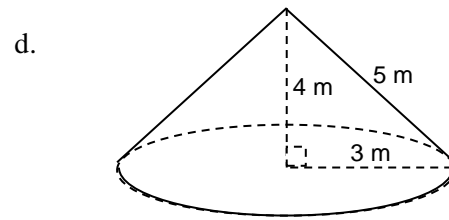
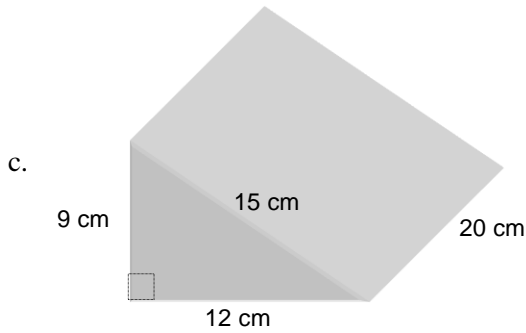
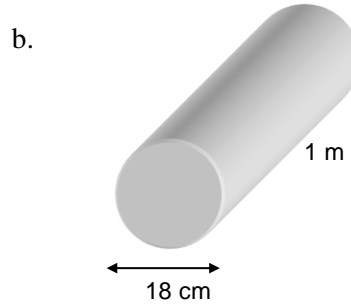
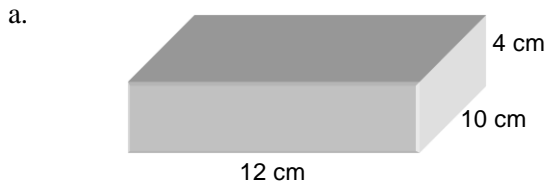
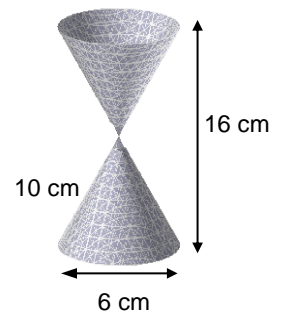


# Surface Area Problems

1. For each shape: i. draw its net ii. use the net to find its surface area



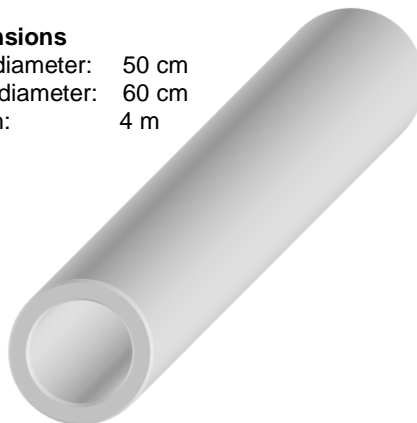
2. You wish to cover the double open-ended cone shown alongside with gold leaf, inside and out. At \$1.20 per  $\text{cm}^2$ , what will it cost?



3. This steel pipe is to completely painted with two coats of anti-rust paint. If one litre of paint covers  $12 \text{ m}^2$ , how much paint is needed? Answer to the nearest tenth of a litre.

**Dimensions**

Inner diameter: 50 cm  
 Outer diameter: 60 cm  
 Length: 4 m



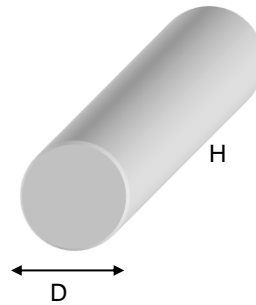
Answers 1 a. ii.  $416 \text{ cm}^2$  b. ii.  $6164 \text{ cm}^2$  c. ii.  $828 \text{ cm}^2$  d. ii.  $75.4 \text{ m}^2$  2. \$452.39  
 3.  $14 \text{ m}^2$ , so 1.2 litres.

# Surface Area Formulas

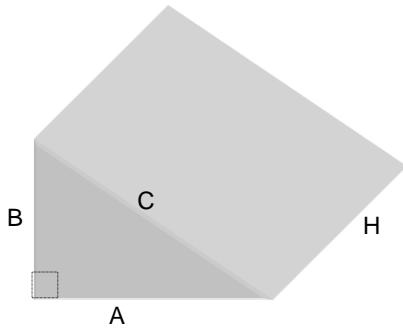
1. a. Show that the formula for the surface area of this rectangular prism is given by  
 $SA = 2(LW + LH + HW)$



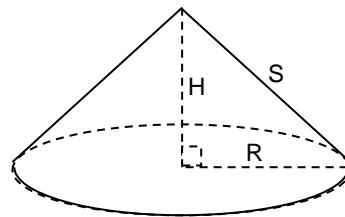
- b. Show that the formula for the surface area of this cylinder is given by  
 $SA = \pi(DH + 2r)$



- c. Show that the formula for the surface area of this triangular prism is given by  
 $SA = (A + C)(B + H)$



- d. Show that the formula for the surface area of this cone is given by  
 $SA = \pi R(R + S)$



2. Find the formula for the surface area of this pipe, in factored form.

**Dimensions**  
Inner diameter:  $r$   
Outer diameter:  $R$   
Length:  $h$

