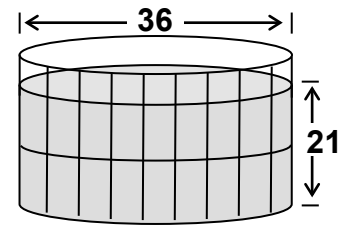


# SURFACE AREA OF PRISMS

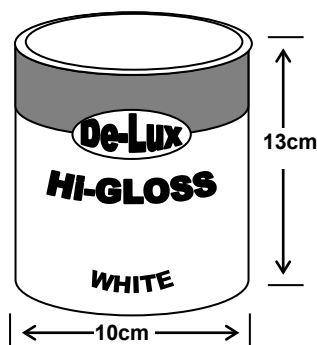
## APPLICATIONS

Q1. This large cylindrical container stores town gas under pressure.

Calculate the surface area of the section of tank standing above ground (flat top and curved vertical sides only).



Dimensions are in metres.



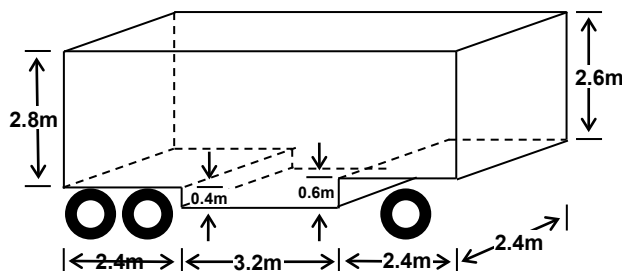
Q2. The diagram shows a small paint tin.

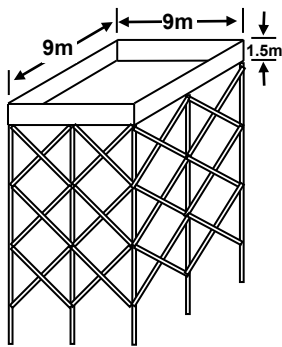
A paper label completely covers the curved surface of the tin.

If 1cm overlap is needed to glue the label, find the area of the label.

Q3. This semi-trailer removal van utilises the space between the wheels to increase its carrying capacity.

The sides, ends and top are made from sheet metal. What is the total area of sheet metal used to construct these parts of the van body?





Q4. The tank of this railway water tower is built in the shape of a rectangular prism with dimensions as shown.

The tank is built from riveted steel plates.

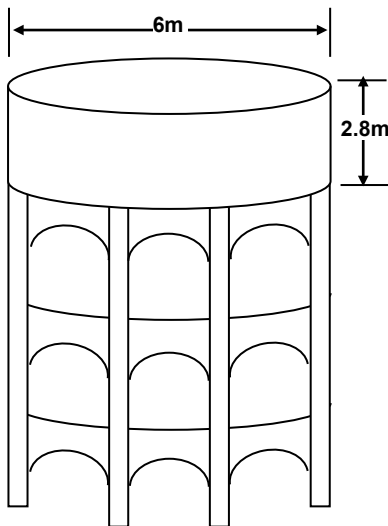
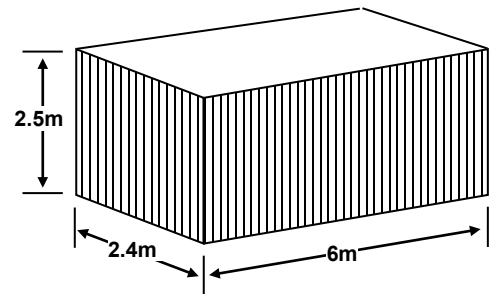
Find the area of steel plate required to make the four walls and the base. (Disregard the extra metal required to join the plates.)

Q5. Steel shipping containers are used to transport goods efficiently.

The outside of this container is to be painted.

Find the area to be painted.

How many litres of paint would be required for one coat of paint if one litre of paint covers 10 square metres?



Q6. This closed cylindrical concrete tank supplies water for a manufacturing process. Its internal dimensions are shown on the diagram.

Calculate the inside area of the vertical wall of this tank.

# ANSWERS

Q1.  $3391.2\text{m}^2$

Q2.  $421.2\text{cm}^2$

Q3.  $100.16\text{m}^2$

Q4.  $135\text{m}^2$

Q5.  $70.8\text{m}^2$ , 7.08L

Q6.  $109.27\text{m}^2$