

Mathematics and Statistics – Garden Sculpture

My sculpture will consist of a rectangular prism on top of a cylinder.

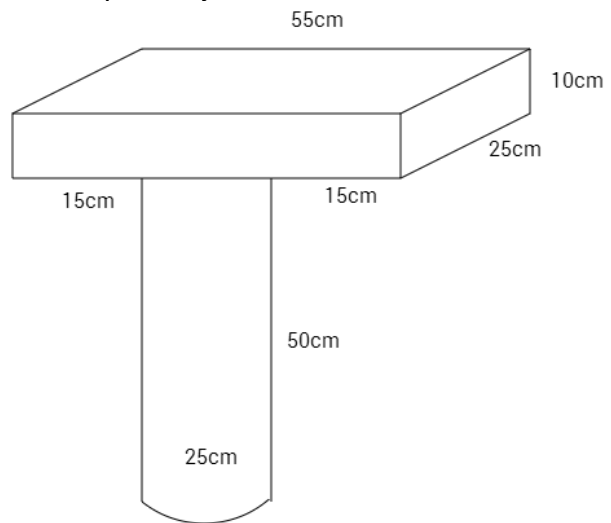
Volume of cube =
 Length x width x height =
 $10 \times 25 \times 55 = 13750\text{cm}^3$

3

Volume of cylinder =
 $\pi \times \text{radius}^2 \times \text{height} =$
 $\pi \times 25^2 \times 50 = 98174\text{cm}^3$

2

Total volume =
 $98174 + 13750 =$
 111924cm^3



The base of the sculpture is a circle with a diameter of 25cm. To find the length of the fence and the area of the paving we must first add the paving onto the base, then find the circumference of the whole circle.

$25 + 60 = 85\text{cm}$ (diameter of whole area = 85cm)

circumference = $\pi \times d = \pi \times 85 = 267\text{cm}$

1

The length of the surrounding fence is 267cm.