

## SAMPLE PAPER 2014 (SET F): PAPER 2

### QUESTION 9 (30 MARKS)

#### Question 9 (a)

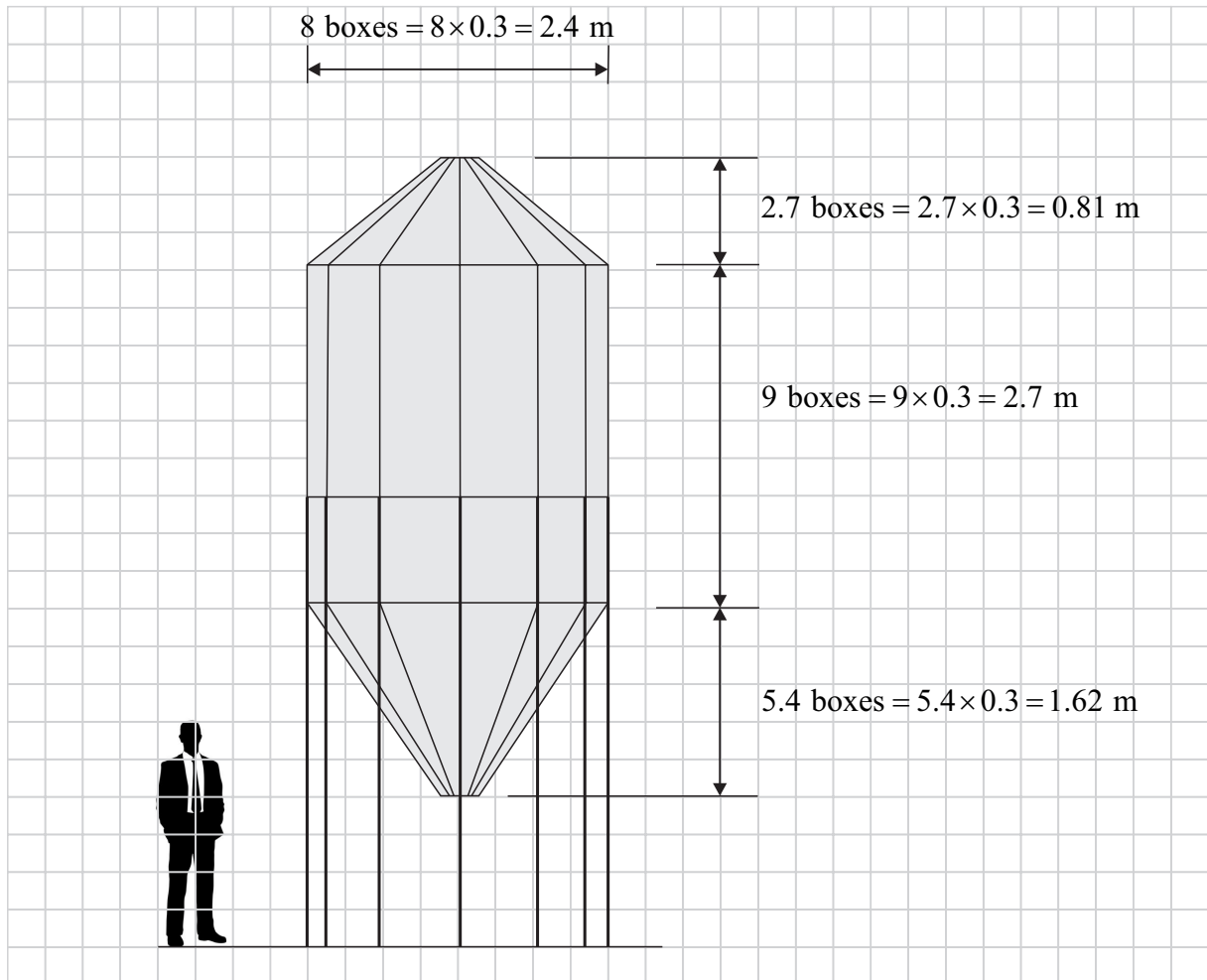
Average height of an adult man = 1.7 m ← You were actually supposed to know this.

#### Question 9 (b)

6 boxes = 1.78 m ← The man's height fills 6 square boxes.

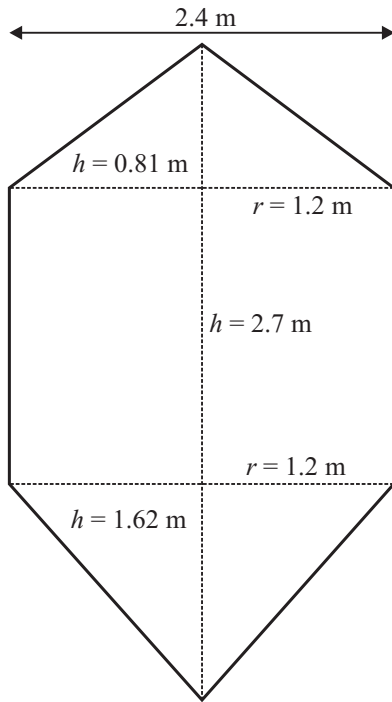
1 box = 0.3 m ← A single square represents a measurement of side 0.3 m.

Count the number of boxes below and multiply by 0.3 m.



**Question 9 (c)**

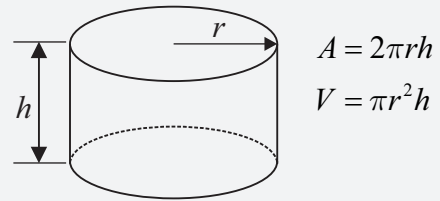
The shape of the tank is made up of two cones and a cylinder.



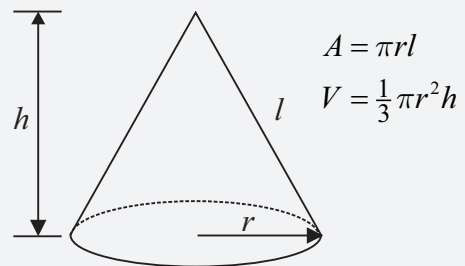
**FORMULAE AND TABLES BOOK**

**Surface area and volume:**

**Cylinder [page 10]**



**Cone [page 10]**



Top Cone:  $V = \frac{1}{3} \pi (1.2)^2 (0.81) = 1.22 \text{ m}^3$

Cylinder:  $V = \frac{1}{3} \pi (1.2)^2 (1.62) = 2.44 \text{ m}^3$

Bottom Cone:  $V = \pi (1.2)^2 (2.7) = 12.21 \text{ m}^3$

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Total Volume =  $15.87 \text{ m}^3$