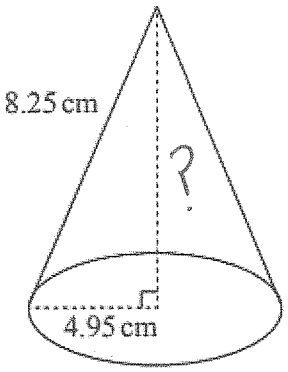
M4 =10 days to go!

Formula Page

16 A cone has a slant height of 8.25 cm and a radius of 4.95 cm.



Pythagoras'

$8.25^2 - 4.95^2 = ?^2$

$43.56 = ?^2$

$\sqrt{43.56}$

Calculate the vertical height of the cone.

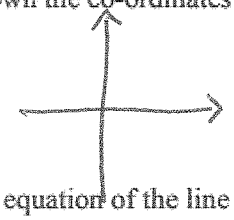
Answer 6.6 cm [3]

9 The line L has equation $y = -3x - 6$

This line crosses the y axis at the point A and the x axis at the point B.

when $x = 0$ when $y = 0$

(a) Write down the co-ordinates of A.



Answer (0 , −6) [1]

(b) Find the equation of the line perpendicular to L which passes through the point B.

$y = mx + c$

$y = -3x - 6$

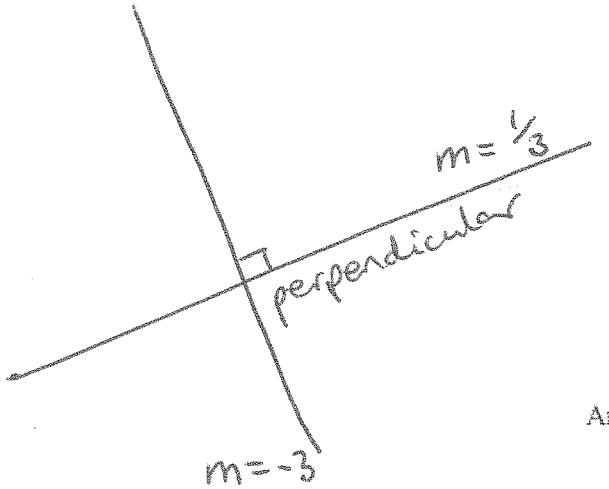
$m = -3$

$y = \frac{1}{3}x + c$

Point B is $(-2, 0)$

$0 = \frac{1}{3}(-2) + c$

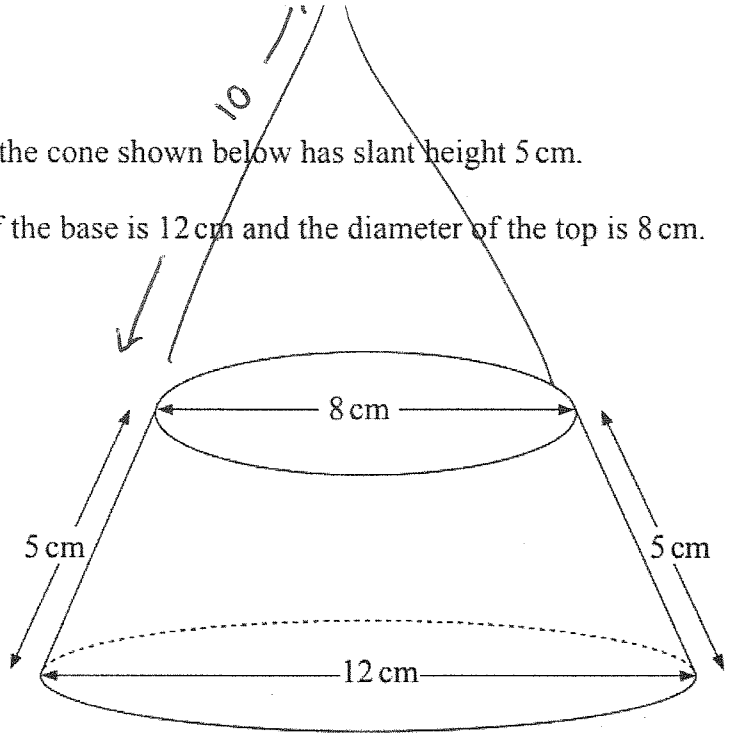
$\frac{2}{3} = c$



Answer $y = \frac{1}{3}x + \frac{2}{3}$ [4]

16 The frustum of the cone shown below has slant height 5 cm.

The diameter of the base is 12 cm and the diameter of the top is 8 cm.



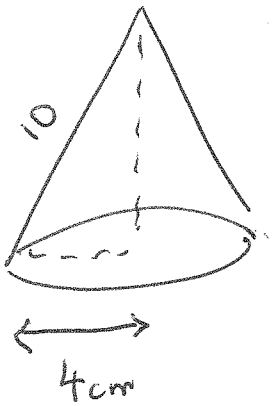
We must find Volume of cones.

Work out the volume of the frustum shown.

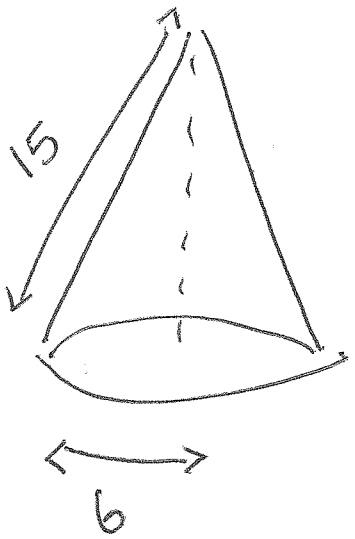
$Vol = \frac{1}{3}\pi r^2 h$

But we need to find h

Very tricky question



$V = \frac{1}{3}\pi 4^2 \times \sqrt{84}$



$V = \frac{1}{3}\pi 6^2 \times \sqrt{189}$

Don't think you will get asked this trickiness!