Year 09
Weekly Tutorial - 07

mathsalpha.com

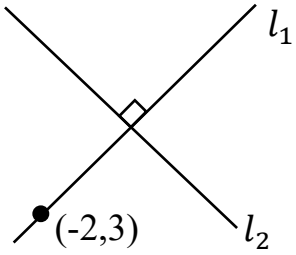
1. Solve $27^{x+1} = 3^{2x+5}$

2. Solve $5x^2 + 32x - 21 = 0$

3. Make x the subject of the formula, $y = 3 + \sqrt{2x - 11}$

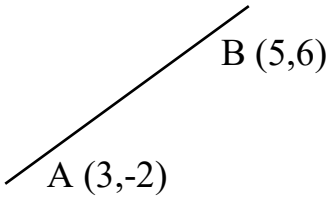
4. y is inversely proportional to cube root of x. When $x = 7$, $y = 5.2$.
Find x when $y = 7.5$

5.



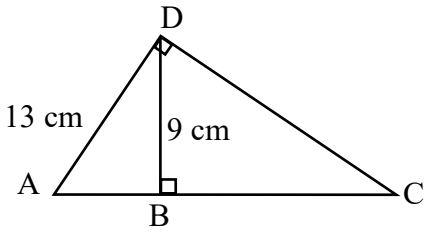
l_1 is passing through point $(-2,3)$.
$l_2 \equiv 2y + 3x - 5 = 0$
Find the equation of line l_1. Give the equaton in the form, ax+by+c=0. Where a, b and c are integers.

6.



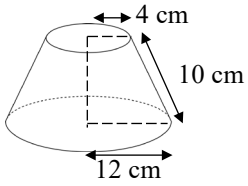
Find the equation of the perpendicular bisector of line AB.

7.



$AB = 13cm$
$BD = 9\ cm$
Find the length DC.

8.



a) Find the curved surface area of the frustum.
b) Find the volume of the frustum.
Give your answers correct to 1dp.

9. Rationalize the denominator, $\frac{1}{(3\sqrt{5}+1)(\sqrt{5}-2)}$

10. An observer is looking at a car from top of a vertical building. He sees the car at an angle of depression of 27^o. Horizontal distance between the building and the car is $125m$. Find the height of the building correct to the nearest meter.

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