Year 09
Tutorial - 09
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1.

a) Rearrange the equation and make x the subject; $y = \frac{2x-3}{5}$

b) Factorize fully, $2x^3 - 8x$

c) Simplify, $\frac{64x^3y^2}{16xy^3}$

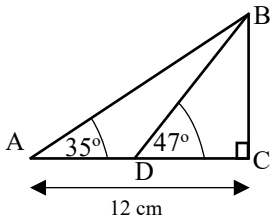
2. Solve, $5x + 3y = 7$
$2x - y = 3$

3. Solve by factorization, $6x^2 + 5x - 6 = 0$

4. Expand and simplify, $(\sqrt{8} + 3)(\sqrt{18} - 3)$

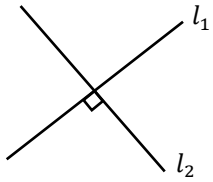
5. y is inversely proportional to cube root of x. When $x = 7.2$, $y = 12.5$. Find x, when $y = 27.3$. Give the answer correct to 1dp.

6.



Find the length DC.

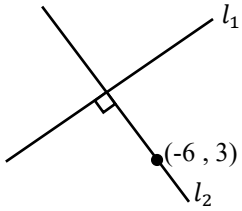
7.



Line l_1 has equation, $3x - 4y - 2 = 0$. Line l_2 passes through $(6,5)$.
Find the equation of line l_2.

8. Rationalize the denominator, $\frac{2\sqrt{5}}{2\sqrt{5}-3}$

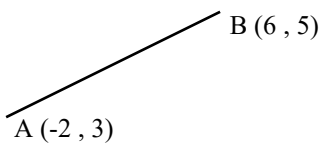
9.



$l_1 \equiv 3x - 4y - 2 = 0$
l_2 passes through point $(-6,3)$
Find the equation of line l_2 in the from $ax + by + c = 0$

10. $l_1 = 5x + 11y - 7 = 0$
$l_2 = 10y - 22x + 5 = 0$
Prove that line l_1 and l_2 are perpendicular.

11.



Find the equation of the perpendicular bisector of the line AB.