Year 09
Weekly Tutorial - 10
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1.

a) Make x the subject $\quad y = \frac{2x-3}{5x}$

b) Factorize fully $\quad 2x^3 - 8x$

c) Simplify $\quad \left(\frac{64x^5y^{-2}}{27y^4x^{-1}}\right)^{-\frac{1}{3}}$

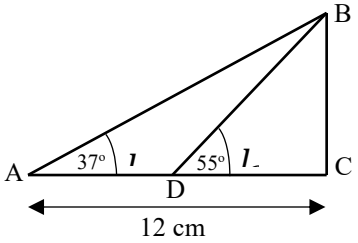
2. Solve $\quad 5x + 3y = 7$
$\qquad\quad 2x - y = 3$

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

4. Expand and simplify $\quad (\sqrt{8} + 5)(\sqrt{8} - 4)$

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

6.



$AC = 12\ cm$
$BAC\measuredangle = 37^o$
$BDC\measuredangle = 55^o$
Find the length DC.

7. Line l_1 has equation $3x - 4y - 2 = 0$. Line l_2 passes through a point (6,5) and it is perpendicular to line l_1. Find the equation of line l_2.
Give the equation in the form, $ax + by + c = 0$, where a,b and c are integers.

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

9. Solve; $\quad 27^{x+1} = 3^{x+7}$

10. Simplify; $\quad \frac{2+\frac{3}{\sqrt{7}}}{5-\frac{3}{\sqrt{7}}}$