

Year 10 - GCSE Preparation

Weekly Tutorial 01

mathsalpha.com

1. Expand and simplify; $(2 - 3x)(x + 3)(x - 4)$

2. Simplify.

a) $\left(\frac{27x^{-12}y^9}{125y^{-1}}\right)^{-\frac{2}{3}}$

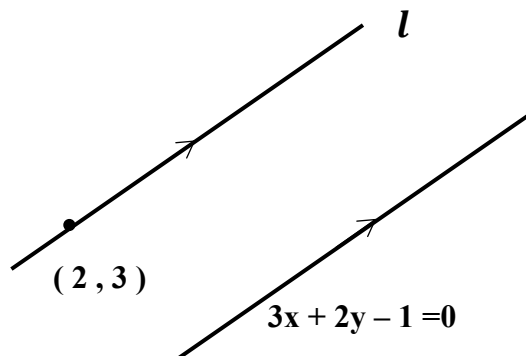
b) $\left(\frac{343}{216}\right)^{-\frac{4}{3}}$

3. Solve; $\frac{2x+3}{4} = x - 5$

4. Solve;
$$\begin{aligned} 2x + 5y &= 11 \\ 3x - 2y &= 13 \end{aligned}$$

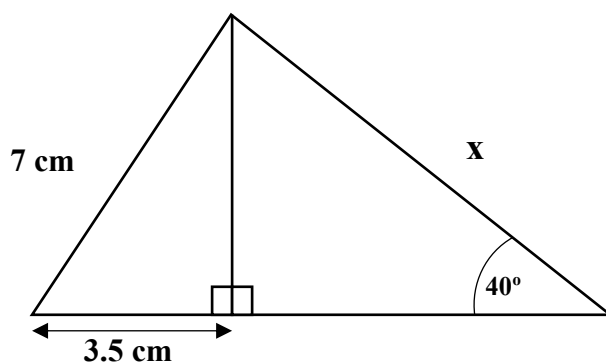
5. Solve by factorization; $2x^2 - 7x - 15 = 0$

6.



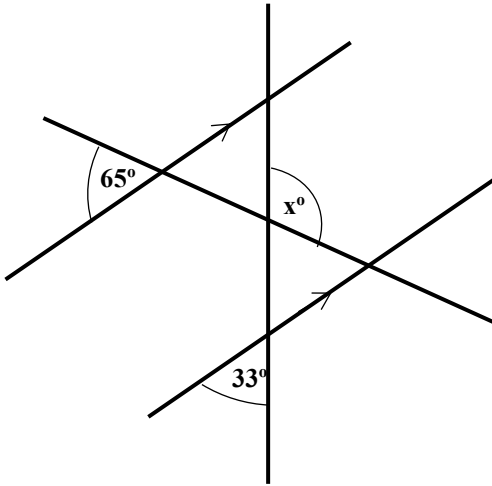
Find the equation of the line l .

7.



Find the length x . Give the answer correct to 1 dp.

8.

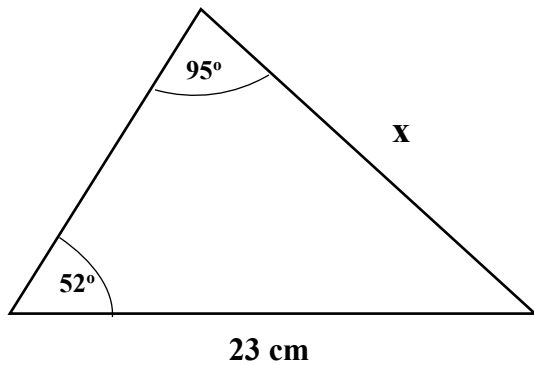
Find the size of angle x° .

9. $f(x) = x^2 = 3x$
 $g(x) = 2x - 1$

a) Find $f(-3)$ b) $fg(2)$

10. $h(x) = \frac{9x+5}{3-2x}$, Find $h^{-1}(x)$.

11.

Find x .

12. Solve $\sqrt{20x} + \sqrt{5} = 2 - 3x$