



Year 8 Weekly Tutorial - 05

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1. Find the values of the following.

a) $\left(\frac{16}{81}\right)^{\frac{3}{2}}$

b) $\left(\frac{27}{64}\right)^{\frac{2}{3}}$

c) $\left(\frac{125}{343}\right)^{\frac{2}{3}}$

2. Find the values of following.

a) $\left(\frac{625}{256}\right)^{-\frac{3}{4}}$

b) $\left(\frac{3}{2}\right)^{-3}$

c) $\left(\frac{64}{27}\right)^{-\frac{1}{3}}$

3. Simplify.

a) $\left(\frac{4x^6}{9y^8}\right)^{-\frac{1}{2}}$

b) $\left(\frac{1}{x^{-2}}\right)^{-\frac{1}{2}}$

c) $\left(\frac{y^{12}x^{-8}}{x^4}\right)^{-\frac{2}{3}}$

4. Expand and simplify.

a) $(3x - 2)(x - 2)(x - 3)$

b) $(4 - x)(3 - x)(x + 5)$

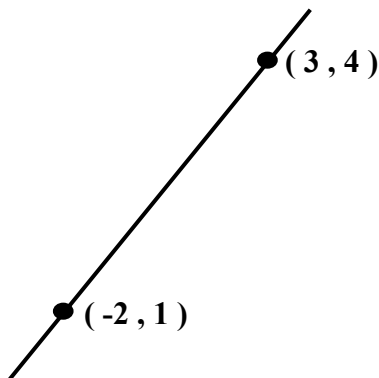
5. Make x the subject.

a) $2y - 3x = \frac{5x+2}{2}$

b) $y = \frac{3x-3}{5-7x}$

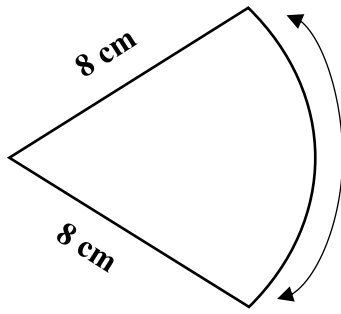
6. Find the gradient and the y-intercept of the straight line, $3x - 4y + 1 = 0$

7.



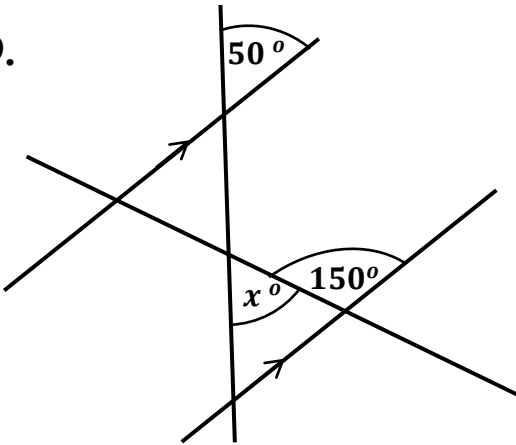
Find the gradient of the straight line.

8.



Area of the sector is 23 cm^2 . Find the length, x correct to 1dp.

9.



a) Find x° .

b) Give reason for your answer.

10. Solve,

$$\begin{aligned} 5x + 3y &= 13 \\ 3x - 2y &= 15 \end{aligned}$$