



Year 8 Weekly Tutorial - 04

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1. Find the values of the following.

a) $(16)^{\frac{3}{4}}$

c) $(27)^{\frac{2}{3}}$

e) $(81)^{\frac{1}{4}}$

g) $(625)^{\frac{3}{4}}$

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

d) $(125)^{\frac{2}{3}}$

f) $(216)^{\frac{2}{3}}$

h) $(343)^{\frac{2}{3}}$

2. Simplify the following.

a) $(8x^6)^{\frac{2}{3}}$

b) $(27a^{12})^{\frac{2}{3}}$

c) $(81a^{12}b^{16})^{\frac{1}{4}}$

3. Expand and simplify.

a) $(x - 2)(x + 1)(x + 3)$

f) $(x + 6)(x - 2)(x - 3)$

b) $(x - 1)(x + 2)(x + 4)$

g) $(x - 1)(x - 2)(x - 3)$

c) $(x + 3)(x - 4)(x + 2)$

h) $(x - 2)(x - 3)(x - 4)$

d) $(x + 4)(x - 1)(x - 2)$

i) $(2x + 1)(x + 2)(x - 4)$

e) $(x - 4)(x + 5)(x + 1)$

j) $(2x - 3)(x + 3)(x - 3)$

4. Make x the subject of the following formula.

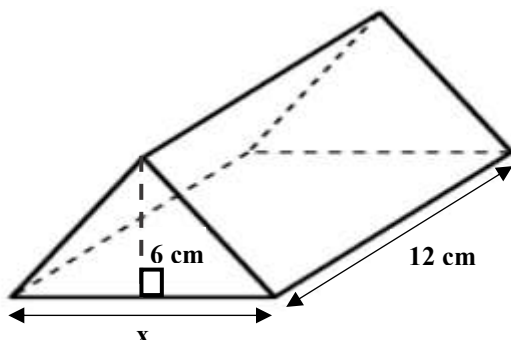
a) $y = 3(x + 5) - 2$

c) $\frac{1}{y} = \frac{2}{x} + \frac{3}{x}$

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

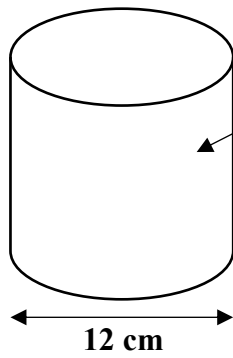
d) $2(y + 2) = \frac{x-7}{2}$

5.



The volume of the prism is 260cm^3 .
Find x .

6.



$$Volume = 468\pi \text{ cm}^3$$

Find the curved surfaced area of the cylinder.

7. Solve, $\frac{2x+5}{x-3} = \frac{-2}{3}$

8. solve, $3 + 5(x - 1) \geq 3x - 17$

9. factorize.

a) $4x^2 - 6x$

b) $x^2 - 49$

c) $x^2 - 64$

10. Simplify.

a) $3\frac{2}{5} \times 2\frac{1}{7}$

b) $5 - 2\frac{1}{3} \div 1\frac{2}{5}$