



Year 8 Weekly Tutorial - 01

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1. Expand and simplify.

a) $3(3x + 1) - 2(5 - x)$

b) $-2(a - b) + 3(2a - b)$

2. Expand and simplify.

a) $(x - 3)(x + 4)$

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

b) $(2a + 3)(3a - 4)$

d) $\left(\frac{1}{x} + x\right)\left(\frac{1}{x} - x\right)$

3. Solve.

a) $-\frac{2}{3}(x - 3) = 4$

b) $\frac{3x-7}{5} = \frac{2x+13}{4}$

4. Solve;

a) $2x + 3y = 7$
 $x - 3y = 8$

c) $5x + 2y = 5$
 $3x + 3y = 9$

b) $3a - 2b = 11$
 $a + b = 7$

d) $\frac{1}{2}x + \frac{1}{3}y = \frac{1}{6}$
 $\frac{2x}{5} - \frac{3y}{4} = \frac{13}{20}$

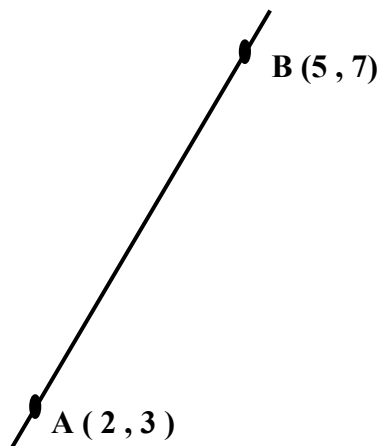
5. Simplify the following.

a) $\frac{2}{3}x^2y \times 9x^5y^2$

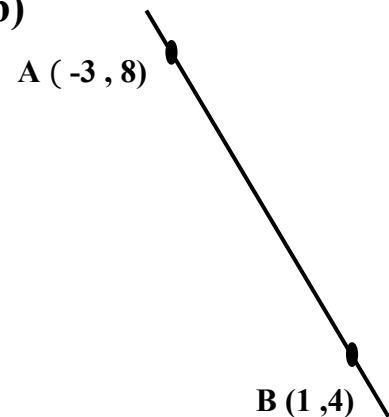
b) $(5xy^2)^3 \times \frac{x^2}{y^3}$

6. Find the gradient and coordinates at the midpoint of the following straight lines.

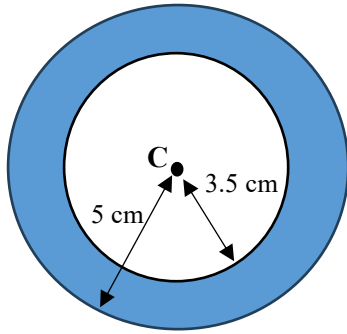
a)



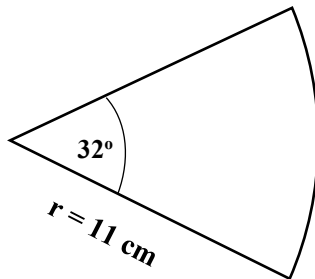
b)



7. Find the shaded area. Give the answer correct to 1dp.



8.



a) Find the area of the sector.

b) Find the arc length.

Give the answers correct to 2dp.