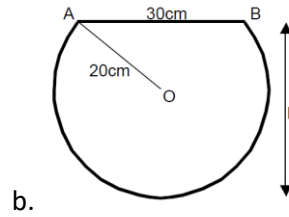
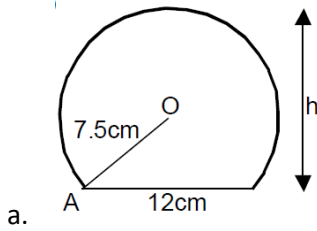
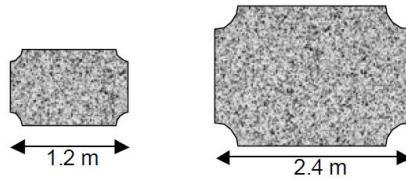


S4 Homework – Week 20

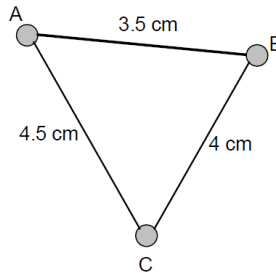
Q1. Calculate the value of h:



Q2. Two kitchen worktops are similar in shape. The area of the smaller worktop is 6.8 m². Calculate the area of the larger worktop.



Q3. Calculate the size of angle ABC:



Q4. Calculate the mean and standard deviation of:

12, 15, 22, 31 & 40

Q6. Simplify:

a. $\frac{6x^3 \times 5x^4}{10x^{-2}}$

b. $\frac{x^2 + 5x}{x^2 + 2x - 15}$

c. $\frac{\sqrt{k}}{k^2}$

b.

Q6. Solve the following correct to 1 significant figure:

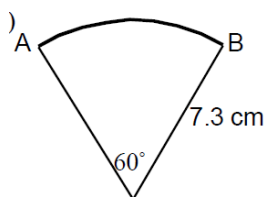
a. $y = x^2 + 5x - 3$

b. $y = 3x^2 - 2x - 4$

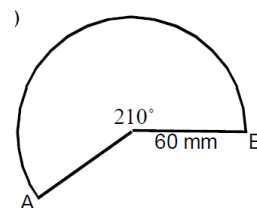
Q7. Calculate:

- i. Area of the sector
- ii. Length of arc

a.



b.



Q8. Find the point of intersection of the lines $8y - 4x = 20$ and $2y + 3x = -7$.

Q9. A straight line passes through the points (3, -5) and (-4, 4). Find the equation of the line.

Q10. A parabola has the equations $y = 4x^2 - 12x - 7$. Find the roots of the equation.