

Homework 23

Where a question asks you to show your working, you will only be awarded the mark for a correct answer if it is supported by an appropriate method.

Due in:

You MUST show your working

<p>1. A sector of a circle has an angle of 45°, and a radius of 6cm. What is the area of the sector?</p>	<p>3. Using a clear written method:</p> $\frac{4}{9} - \frac{1}{3}$
<p>2. Find the LCM of 6 and 21.</p>	<p>4. Simplify the following expression.</p> $\frac{3a^6 \times 5a^{-1}}{a^{-4}}$

5. One of the angles in an isosceles triangle is 31° . What could the other two angles of the triangle be?
(Hint: there are two possible solutions!)

8. Two fifths of an amount is 6. What is one and one quarter of the amount?
Show your working out.

6. The mean of a set of 6 numbers is 5. Four of the numbers are 3, 3, 5, 9 and 10. What is the sixth number?

9. Share £480 in the ratio 12:4.

7. A shirt is reduced by 20% in the sales. It now costs £24. How much was it originally?

10. Write down the first 5 terms of the sequence
 $T(n) = 4 - 7n$

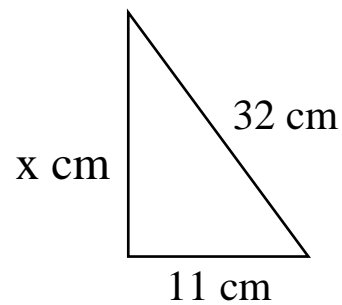
11. Solve the equation:

$$2(3x - 2) = 10x - 15$$

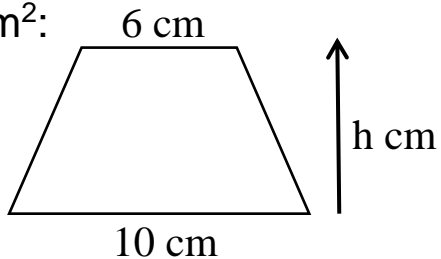
14. Round 23589 to 2 significant figures.

12. Convert 175 pints into litres.

15. Calculate the length of the side marked x . Show your working giving your answer to 1 decimal place.



13. Calculate the height of the shape given the area is 40cm^2 :



16. Expand and simplify:

$$(b - 4)(b + 8)$$

17. Construct a 30° angle using compasses and a straight edge.



19. What is the sum of the interior angles of a nonagon?

18. A circle has a diameter of 10cm. It is enlarged by a scale factor of 0.5. What is the area of the new circle?

20. Write the equation of a line which is parallel to:

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

Total:

