

# Homework 21

---

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

1. The diameter of a circle is 28cm. Calculate its area.  
Give your answer correct to 1dp

3. Using a clear written method:

$$\frac{5}{9} - \frac{2}{5}$$

2. Find the LCM of 20 and 24.

4. Simplify the following expression.

$$\frac{5c^2 \times 4a^5}{2a^3}$$

5. One of the angles in an isosceles triangle is  $56^\circ$ . What could the other two angles of the triangle be?  
(Hint: there are two possible solutions!)

8.  $\frac{5}{8}$  of an amount is \$25. What is  $2\frac{1}{2}$  times the amount?  
Show your working out.

6. The mean of a set of 5 numbers is 7. Four of the numbers are 3, 3, 9 and 10. What is the fifth number?

9. Share £750 in the ratio 2:5:3.

7. A jumper is reduced by 35% in the sales. It originally cost £48. How much is it in the sale?

10. Write down the first 5 terms of the sequence  
 $T(n) = 8n - 5$

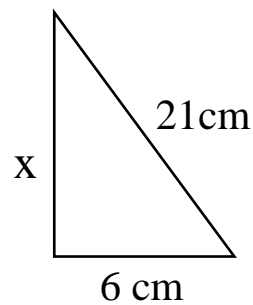
11. Solve the equation:

$$3(2x + 7) + 2(5x - 3) = -1$$

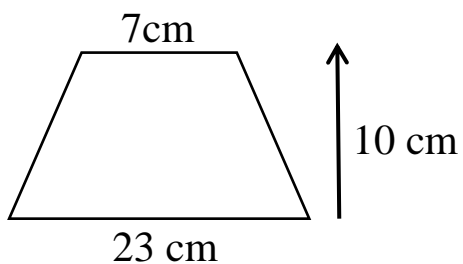
14. Round 16.258 to 2 significant figures.

12. Convert 49 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 area of the shape:



16. Expand and simplify:

$$(x - 10)(3x + 4)$$

17. Construct a perpendicular from the point marked through the line using compasses and a straight edge.



19. What is a regular polygon with an exterior angle of  $18^\circ$  called?

(You will need to look the name up)

18. A circle has a diameter of 11cm. It is enlarged by a scale factor of 5. What is the circumference of the new circle?

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

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

Total:

