

## Homework 22

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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 32cm. Calculate its area.  
Give your answer correct to 1dp

3. Using a clear written method:

$$\frac{8}{9} + \frac{2}{5}$$

2. Find the LCM of 8 and 14.

4. Simplify the following expression.

$$\frac{4a^2 \times 6a^5}{3a^4}$$

5. One of the angles in an isosceles triangle is  $28^\circ$ . What could the other two angles of the triangle be?  
(Hint: there are two possible solutions!)

8. Two thirds of an amount is 12. 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 jumper is reduced by 25% in the sales. It now costs £45. How was it originally?

10. Write down the first 5 terms of the sequence  
 $T(n) = 10 - 2n$

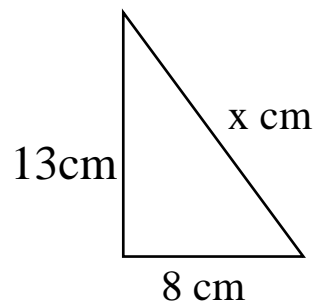
11. Solve the equation:

$$7(2x + 3) - 8 = 55$$

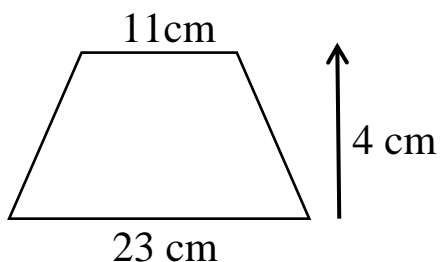
14. Round 23589 to 3 significant figures.

12. Convert 21 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:

$$(a - 1)(a + 1)$$

17. Construct an equilateral triangle using compasses and a straight edge.



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

18. A circle has a diameter of 14cm. It is enlarged by a scale factor of 0.5. What is the circumference of the new circle?

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

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

Total:

