# Homework 18

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

Due in:

| 1. The diameter of a circle is 126mm. Calculate its area. Give your answer correct to 2dp | 3. Using a clear written method: $$\frac{2}{3} + \frac{5}{8}$$ |
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| 2. Find the LCM of 8 and 12. | 4. Simplify the following expression. $$\frac{5a^8 \times 4a^3}{2a^5}$$ |

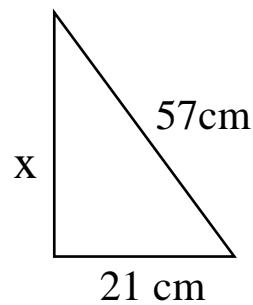| | |
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| 5.  One of the angles in an isosceles triangle is 56°. What could the other two angles of the triangle be?<br>(Hint: there are two possible solutions!) | 8. $\frac{2}{3}$ of an amount is \$6.  What is 10 times the amount? Show your working out. |
| 6.  The mean of a set of 5 numbers is 4.  Four of the numbers are   2, 3, 5 and 9. What is the fifth number? | 9.  Share £385 in the ratio 6:2:7. |
| 7.  A cabinet is reduced by 45% in the sales. It originally cost £280. How much is it in the sale? | 10.  Write down the first 5 terms of the sequence T(n) = 11 – 4n |

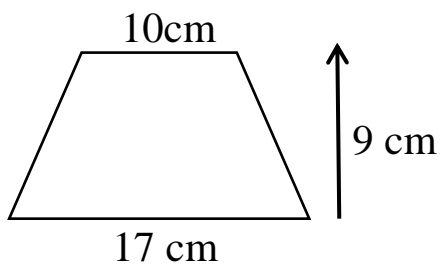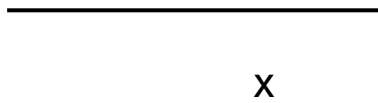| 11. Solve the equation:<br><br>$3(x + 1) + 7(x + 3) = 64$ | 14. Round 72.896 to 2 significant figures. |
|---|---|
| 12. Convert 75 litres into pints. | 15. Calculate the length of the side marked x. Show your working giving your answer to 1 decimal place.<br><br>57cm<br>x<br>21 cm |
| 13. Calculate the area of the shape:<br><br>10cm<br>9 cm<br>17 cm | 16. Expand and simplify:<br><br>$(x - 4)(3x - 1)$ |

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| 17. Construct a perpendicular from the point marked to the line using compasses and a straight edge.<br><br><br><br><br><br>—————————————<br><br>         X | 19. What is a regular polygon with an exterior angle of 22.5° called?<br>(You will need to look the name up) |
| 18. A circle has a diameter of 5cm. It is enlarged by a scale factor of 3. What is the circumference of the new circle? | 20. Write the equation of a line which is parallel to:<br><br>$$y = 2(3x - 5)$$ |

Total: