

## Higher (Grade 4-6) GCSE Mini Test 4

- 1** A car travels at an average speed of 65 miles per hour for 2 hours and 20 minutes.

Work out distance travelled by the car.  
Give your answer to 1 decimal place.

151.7 miles

- 2** A piece of silver has a mass of 985 grams and a volume of  $94 \text{ cm}^3$ .

Work out the density of the piece of silver.

$10.5 \text{ g/cm}^3$

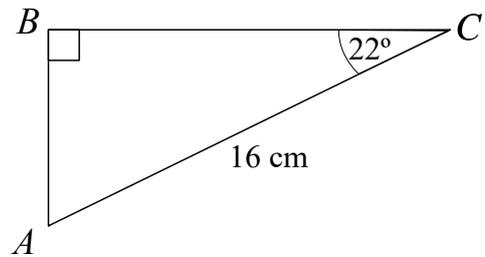
- 3** Glen and Harper share some money in the ratio 2:3  
Glen gets £ $G$  and Harper gets £ $H$

India and Jade share the same amount of money as Glen and Harper.

They share their money in the ratio 3:1  
India gets £ $I$  and Jade gets £ $J$

Find  $G:H:I:J$       $8 : 12 : 15 : 5$

**4**



Calculate the length  $BC$ .      $14.8 \text{ cm (1dp)}$

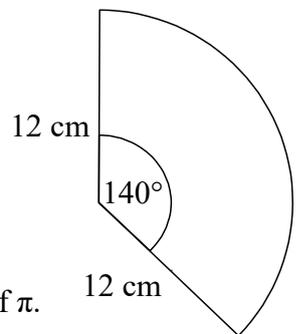
**5**

Calculate  $(5 \times 10^6) \times (3.5 \times 10^{-3})$   
Give your answer in standard form.

$1.75 \times 10^4$

**6**

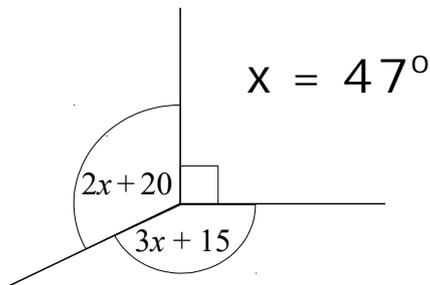
$56\pi \text{ cm}^2$



Find the area of the sector.  
Give your answer in terms of  $\pi$ .

**7**

Work out the value of  $x$ .



**8**

Carly and James share some money in the ratio 5 : 3  
Carly gets £32 more than James.

Work out how much money James gets.

£48

**9**

Simplify  $(5ab^2)^3$

$125a^3b^6$

**10**

It takes 5 builders 4 days to build a wall.  
Work out how many days it would take 2 builders to build the same wall.

10 days

**11** Solve the simultaneous equations:

$$\begin{aligned} 7x + 2y &= 23 \\ 5x - 4y &= 30 \end{aligned}$$

$$x = 4$$

$$y = -2.5$$

**13** The size of each exterior angle in a regular polygon is  $30^\circ$

Work out how many sides the polygon has.

12 sides

**15** Find an estimate for the mean temperature.

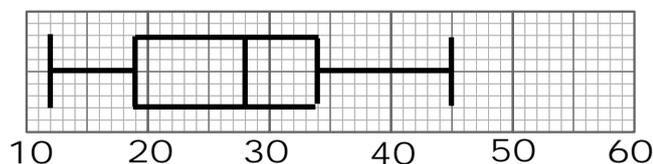
Temperature ( $^\circ\text{C}$ )	Frequency
$14 < t \leq 18$	4
$18 < t \leq 22$	16
$22 < t \leq 26$	7
$26 < t \leq 30$	3

21.2 $^\circ\text{C}$

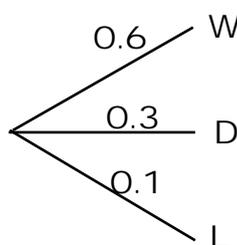
**17** Find the value of  $(27x^9)^{\frac{2}{3}}$

$$9x^6$$

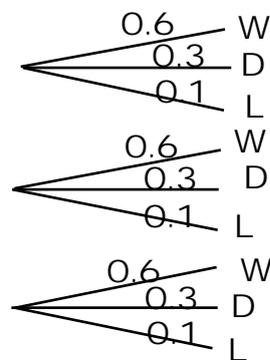
**19** Lowest = 12  
 Inter Quartile Range = 15  
 Median = 28  
 Upper Quartile = 34  
 Highest = 45  
 Draw a box plot for this information.



**12** 1st Game



2nd Game



**14** Find the lowest common multiple (LCM) of 28 and 40

280

**16** Mr Idris has 4 pairs of trousers, 8 shirts and 3 ties.

Work out the total number of ways of choosing a pair of trousers, a shirt and a tie.

96

**18** A car's value is decreasing by  $x\%$  each year. The car will half in value in 6 years, work out the value of  $x$ . Give your answer to 1 decimal place.

10.9%

**20**  $\angle ACB = 90^\circ$   
 Angle in a semi circle =  $90^\circ$   
 $x = 18^\circ$   
 Angles in a triangle add to  $180^\circ$   
 Find the value of  $x$ .  
 You must show all your working.

