

## Higher (Grade 4-6) GCSE Mini Test 3

- 1** Dani leaves her house at 08 00.  
She drives 56 miles to work.  
She drives at an average speed of 48 miles per hour.

At what time does Dani arrive at work?

09 10

- 2** Liquid A has a density of  $1.15 \text{ g/cm}^3$   
Work out the mass of  $150 \text{ cm}^3$  of Liquid A.

172.5 grams

- 3** The points A, B, C and D lie in order on a straight line.

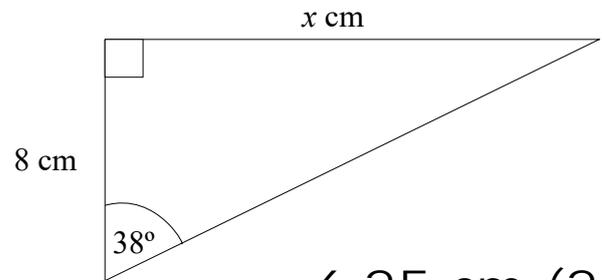


$$AB:BD = 1:3 \quad \text{and} \quad AC:CD = 13:9$$

Find  $AB:BC:CD$

11 : 15 : 18

**4**



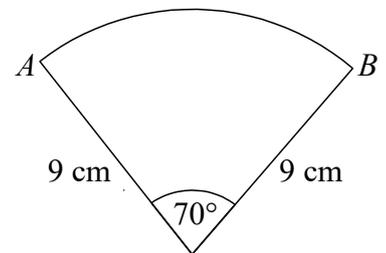
6.25 cm (2dp)

Work out the value of  $x$ .

- 5** Work out  $\frac{5.52 \times 10^8}{2.4 \times 10^5}$   
Give your answer in standard form.

$2.3 \times 10^3$

**6**

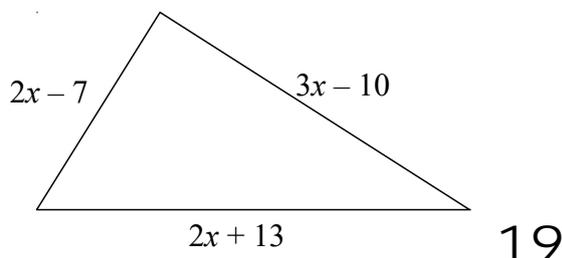


Find the length of the arc  $AB$ .

Give your answer in terms of  $\pi$ .

$\frac{7}{2}\pi \text{ cm}$

- 7** The perimeter of the triangle is 129 cm.  
Work out the value of  $x$ .



19

**8**

Jerry and Mick share some money in the ratio 2 : 3  
Mick gets £300

Work out how much money Jerry gets.

£200

- 9** Write down the reciprocal of 4

$\frac{1}{4}$

**10**

3 tins of beans and 4 tins of tomatoes costs £2.23  
5 tins of beans costs £1.45

Work out how much one tin of tomatoes costs.

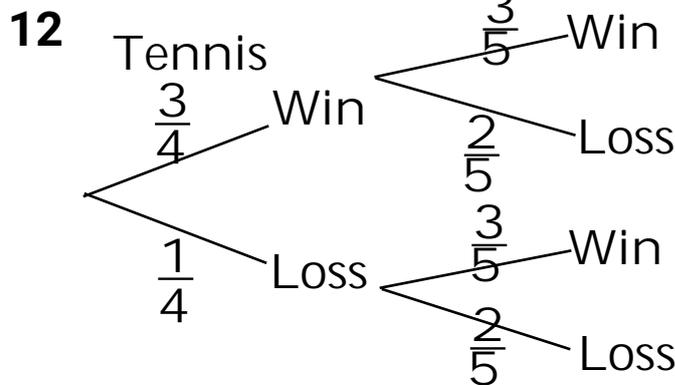
34p

**11** Solve the simultaneous equations:

$$\begin{aligned} x - 3y &= 4 \\ 4x + y &= -23 \end{aligned}$$

$$x = -5$$

$$y = -3$$



**13** The size of each interior angle in a regular polygon is  $165^\circ$

Work out how many sides the polygon has.

24 sides

**14** Find the highest common factor (HCF) of 64 and 112

16

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

Time (minutes)	Frequency
$15 < t \leq 17$	4
$17 < t \leq 19$	13
$19 < t \leq 21$	8
$21 < t \leq 23$	5

18.9 mins

**16** There are 5 starters, 6 main courses and 4 desserts in a restaurant.

Work out the total number of ways of choosing a starter, a main course and a dessert.

120

**17** Find the value of  $\left(\frac{9}{25}\right)^{-\frac{3}{2}}$

$$\frac{125}{27}$$

**18** A cube's length is increased by 14%. Find the increase in the cube's volume.

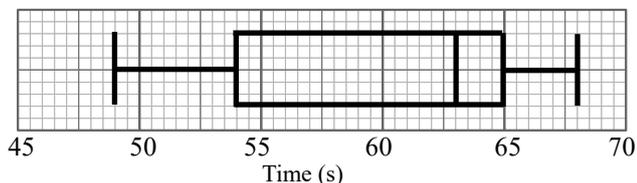
Give your answer to 3 significant figures.

48.2%

**19** The times of 11 runners, in seconds, are recorded below.

49 52 54 57 62 63 64 64 65 65 68

Draw a box plot for this information.



**20**  
 $84^\circ$

Opposite angles in a cyclic quadrilateral

sum to  $180^\circ$

Find the size of angle  $BCD$ .

Give a reason for your answer.

