

11 The diagram shows trapezium  $ABCD$  in which  $BC$  and  $AD$  are parallel.

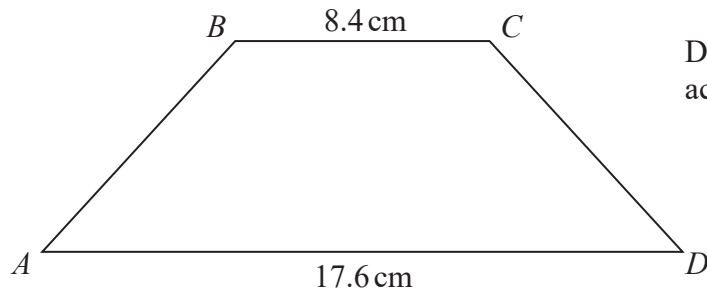


Diagram **NOT** accurately drawn

The trapezium has exactly one line of symmetry.

$$BC = 8.4\text{ cm}$$

$$AD = 17.6\text{ cm}$$

The trapezium has area  $179.4\text{ cm}^2$

Work out the size of angle  $ABC$ .

Give your answer correct to 1 decimal place.

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(Total for Question 11 is 6 marks)



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12 Solve the simultaneous equations

$$7x - 2y = 34$$

$$3x + 5y = -3$$

Show clear algebraic working.

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 12 is 4 marks)



P 6 2 6 5 2 A 0 1 3 2 8

- 13** Jan invests \$8000 in a savings account.  
The account pays compound interest at a rate of  $x\%$  per year.  
At the end of 6 years, there is a total of \$8877.62 in the account.

Work out the value of  $x$ .  
Give your answer correct to 2 decimal places.

$$x = \dots\dots\dots$$

**(Total for Question 13 is 3 marks)**

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14  $F$  is inversely proportional to the square of  $v$ .

Given that  $F = 6.5$  when  $v = 4$

find a formula for  $F$  in terms of  $v$ .

.....  
**(Total for Question 14 is 3 marks)**



P 6 2 6 5 2 A 0 1 5 2 8



(b) Work out the probability that at least one of the spinners will land on green.

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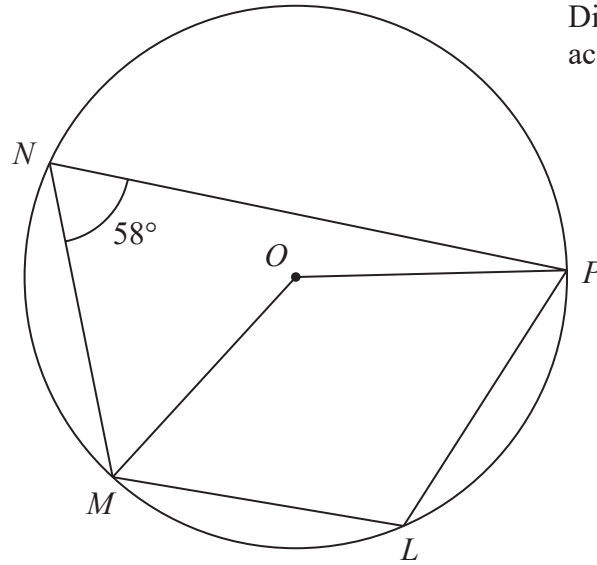
.....  
(3)

**(Total for Question 15 is 5 marks)**



P 6 2 6 5 2 A 0 1 7 2 8

Diagram **NOT** accurately drawn



$L, M, N$  and  $P$  are points on a circle, centre  $O$

Angle  $MNP = 58^\circ$

(a) (i) Find the size of angle  $MLP$

.....<sup>o</sup>

(ii) Give a reason for your answer.

.....  
 .....

(2)

(b) Find the size of the reflex angle  $MOP$

.....<sup>o</sup>

(2)

(Total for Question 16 is 4 marks)



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17 A metal block has a mass of 5 kg, correct to the nearest 50 grams.  
The block has a volume of  $(1.84 \times 10^{-3}) \text{ m}^3$ , correct to 3 significant figures.

Work out the upper bound for the density of the block.  
Give your answer in  $\text{kg/m}^3$  correct to 1 decimal place.  
Show your working clearly.

.....  $\text{kg/m}^3$

(Total for Question 17 is 4 marks)

