1st Class Maths

PRACTICE PAPER FOR

AQA Paper 3F
(June 2024)

-------------------------------- **Disclaimer** --------------------------------

This paper has been created based on the **most common** paper 3 topics from previous years and also careful analysis of what topics have already appeared in paper 1/2. The paper should be excellent at helping students revise for exams, however should not be relied upon as the basis for revision. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. Some topics may appear, some may not. Anybody giving you any sort of guarantee is misleading you. If any topics or questions from this paper do come up, this is just lucky guessing and nothing more. ☺

Ultimately the best way to prepare for the exams is to **revise all topics**.

You can find a link to this paper and many more completely free resources at
www.1stclassmaths.com

@1stclassmaths

Do not write outside the box

Answer **all** questions in the spaces provided.

1   Write down the value of the digit 8 in the number 18235   **[1 mark]**

Answer _____

2   Write down an integer that is less than –5   **[1 mark]**

Answer _____

3 (a)   Solve $a - 7 = 8$ **[1 mark]**

$a =$ _____

3 (b)   Solve $5t = 55$ **[1 mark]**

$t =$ _____

    © 2024 1stclassmaths   Video Solutions

4   Here is a list of numbers

    1   7   9   20   36

4 (a)   From the list, write down a multiple of 10   **[1 mark]**

Answer _____

4 (b)   From the list, write down a factor of 10   **[1 mark]**

Answer _____

4 (c)   From the list, write down a prime number.   **[1 mark]**

Answer _____

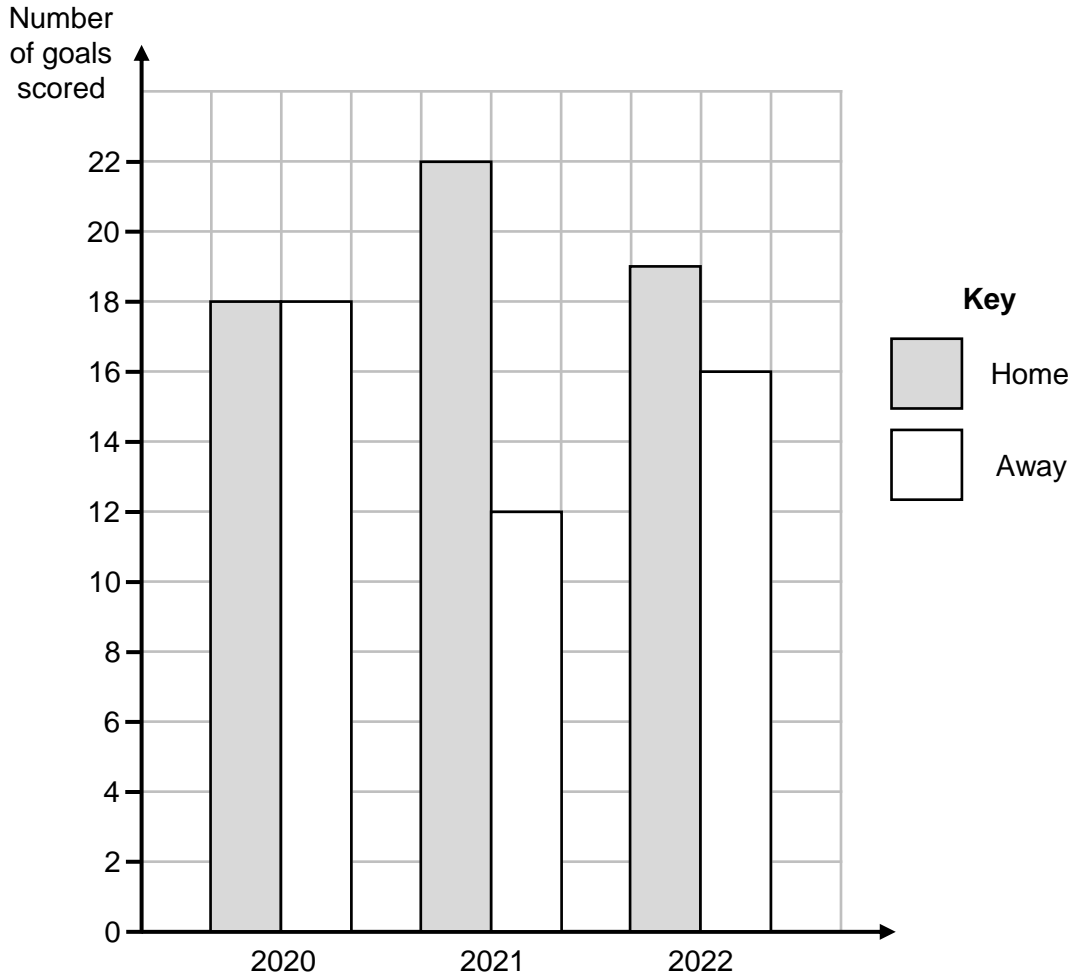**5**   Simplify fully   12 : 30   **[1 mark]**

_____

_____

Answer _____

8

Turn over ▶

6 The bar chart shows the number of home and away goals scored by a football team in 2020, 2021 and 2022.

6 (a) Work out the year in which the team scored the greatest total goals. **[2 marks]**

Answer _____

Do not write outside the box

6 (b) Work out the fraction of the goals scored in 2022 that were from home games

[2 marks]

Answer _____

6 (c) In 2023 the team scored 40 total goals.

$\frac{3}{5}$ of these goals were scored at home matches.

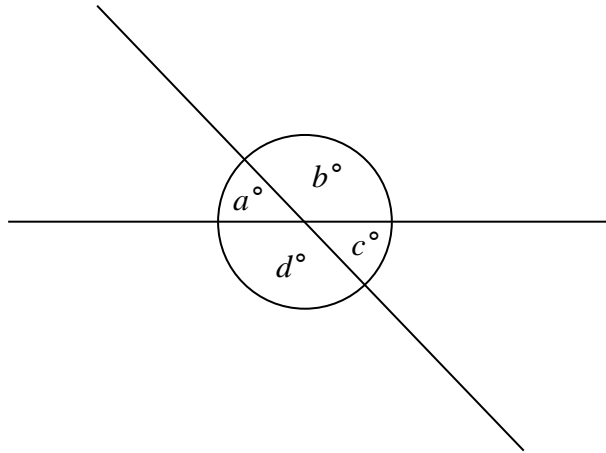Work out how many goals the team scored at away matches in 2023 **[2 marks]**

Answer _____

6

Turn over ▶

7

Write a number in each of the boxes below to make the statements correct.

[3 marks]

$$a + b = \boxed{}$$

$$a - c = \boxed{}$$

$$a + b + c + d = \boxed{}$$

Do not write outside the box

8 Here is a triangular prism.
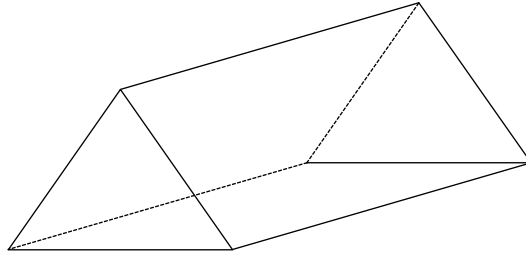
Complete the table below. **[3 marks]**

Name	Triangular Prism
Number of Faces	
Number of Edges	
Number of Vertices	

9 Complete the bank statement **[3 marks]**

Date	Description	Credit (£)	Debit (£)	Balance (£)
01/04/24	Starting Balance			3252.23
09/04/24	Council Tax		219.99	
15/04/24	Birthday Gift	30.00		
28/04/24	Salary			5642.28

9

Turn over ▶

10 (a)   Here is a number machine.

Input   Output

m ÷ 4
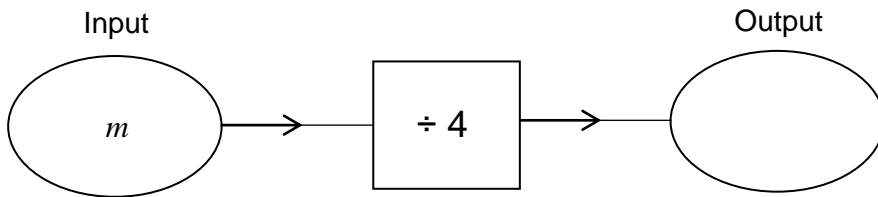
Write an expression for the output.   **[1 mark]**

Answer _____

10 (b)   Here is another number machine.

Input   Output

p ×2   +q
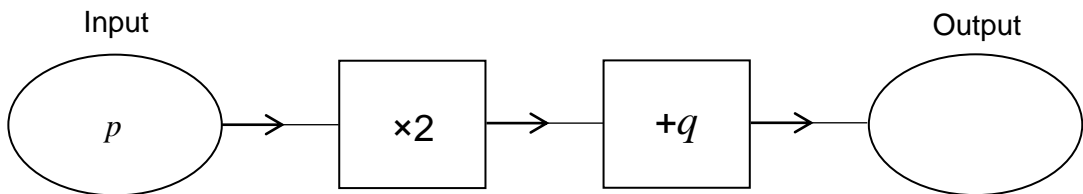
Write an expression for the output.   **[2 marks]**

Answer _____

11 The table shows the number of exam sat in a week by 20 students.

Number of Exams	Frequency	
0	1	
1	2	
2	3	
3	12	
4	2	

11 (a) Write down the modal number of exams sat.

[1 mark]

Answer _____

11 (b) Work out the mean number of exams sat per student.

[3 marks]

Answer _____

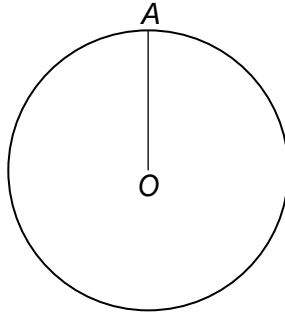7

Turn over ▶

12 Here is a circle with centre *O*.

OA = 9 cm

Work out the circumference of the circle.
Give your answer to 1 decimal place. **[2 marks]**

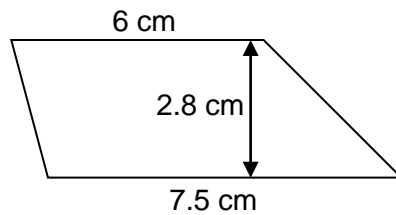Answer _____ cm

13 Here is a trapezium.

6 cm

2.8 cm

7.5 cm

Work out the area of the trapezium. **[2 marks]**

Answer _____ cm^2

Do not write outside the box

14   Simon drives 96 miles from Manchester to Birmingham.

He leaves at 10 am and drives at an average speed of 40 mph.

Will Simon arrive in Birmingham before 12:30pm?
Tick **one** box.

☐ Yes   ☐ No

Show working to support your answer.   **[3 marks]**

15 (a)   Expand $h(h + 2)$ **[1 mark]**

Answer _____

15 (b)   Factorise $20a + 80$ **[1 mark]**

Answer _____

$\frac{}{9}$

Turn over ▶

16 The table shows how many sales a business makes for four different years.

	2018	2019	2020	2021
Number of Sales	3000		3200	2560

16 (a) Between 2018 and 2019 the number of sales increased by 12%
Work out the number of sales for 2019 **[2 marks]**

Answer _____

16 (b) Between 2020 and 2021 the number of sales decreased by x%
Work out the value of x **[3 marks]**

$x =$ _____

17 A coffee shop owner recorded the orders of 100 visitors.

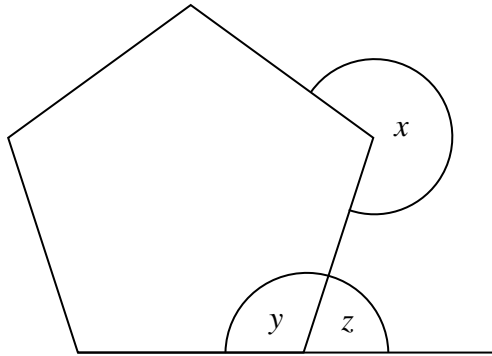ξ = the visitors to the coffee shop
F = ordered food
D = ordered drink

ξ

F   D

27   48   24

1
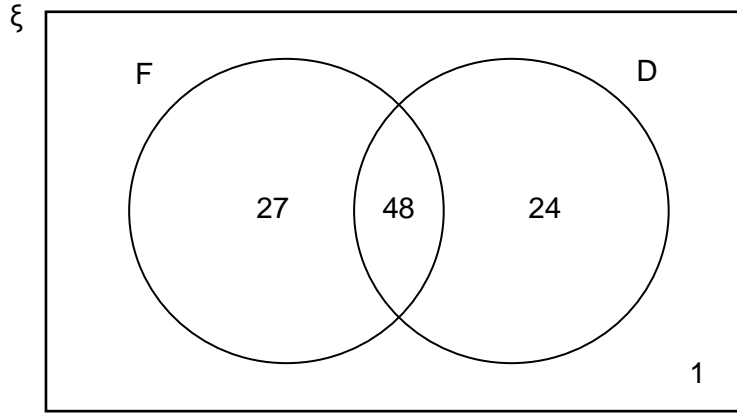
Complete the frequency tree below.   **[4 marks]**

**ordered
drink**

**ordered
food**

**total
visitors**

Yes

Yes

No

100

No

Yes

No

9

Turn over ▶

Video Solutions
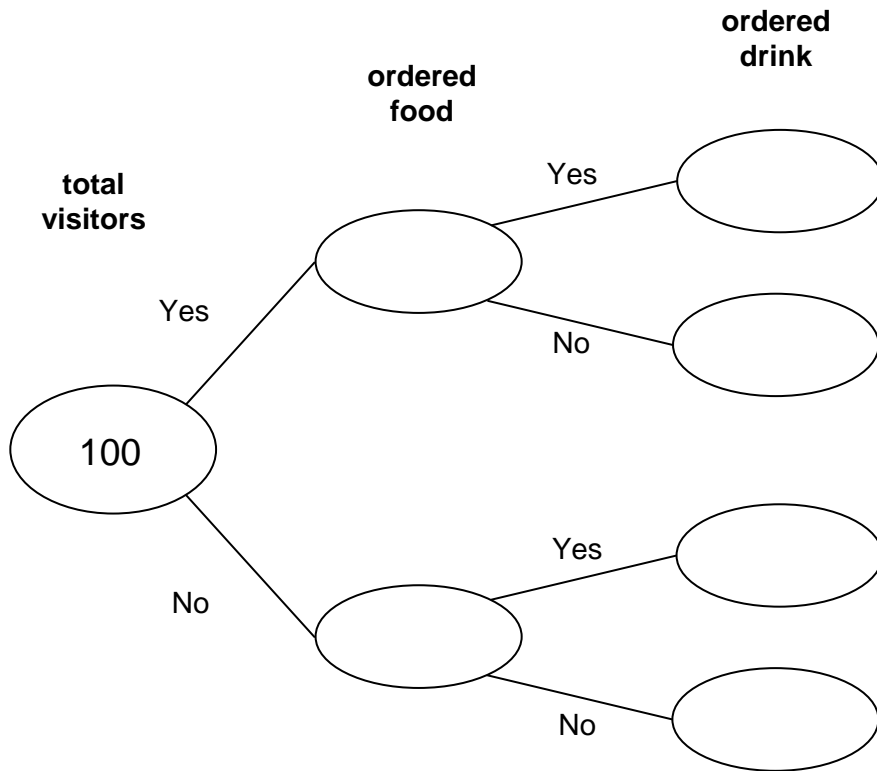
18   Here is a regular pentagon.

18 (a)   Write down the letter of the angle that is an **interior** angle.   **[1 mark]**

Answer _____

18 (b)   Write down the letter of the angle that is an **exterior** angle.   **[1 mark]**

Answer _____

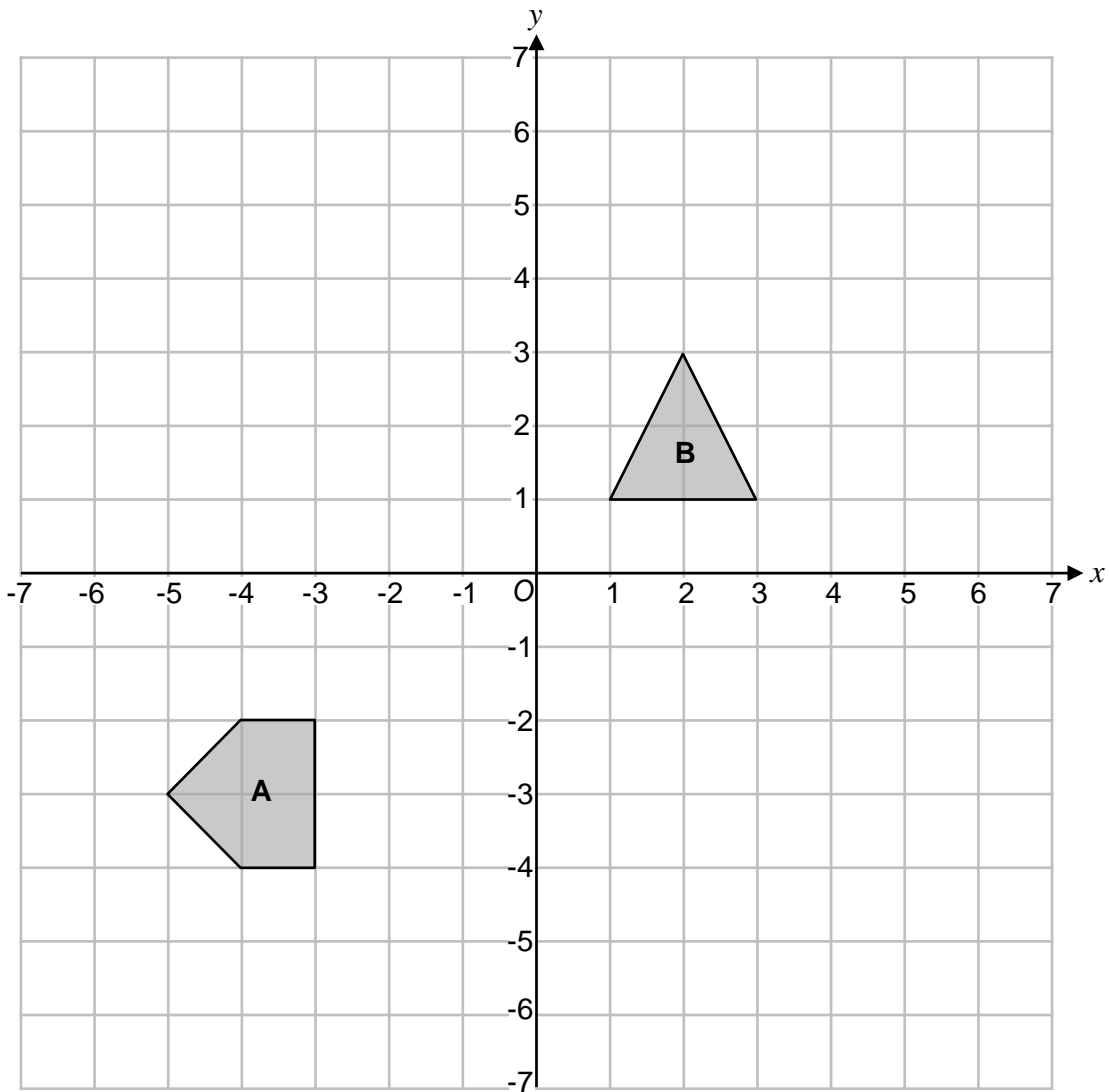**18 (c)**   Work out the size of the angle marked z.   **[2 marks]**

_____

_____

_____

°

Answer _____

19   Shape **A** and Shape **B** are shown on the grid below.

19 (a)   Rotate shape **A** 90° anticlockwise about (–1, 1)   **[2 marks]**
Label the image shape **C**.

19 (b)   Reflect shape **B** in the line $y = 3$ **[2 marks]**
Label the image shape **D**.
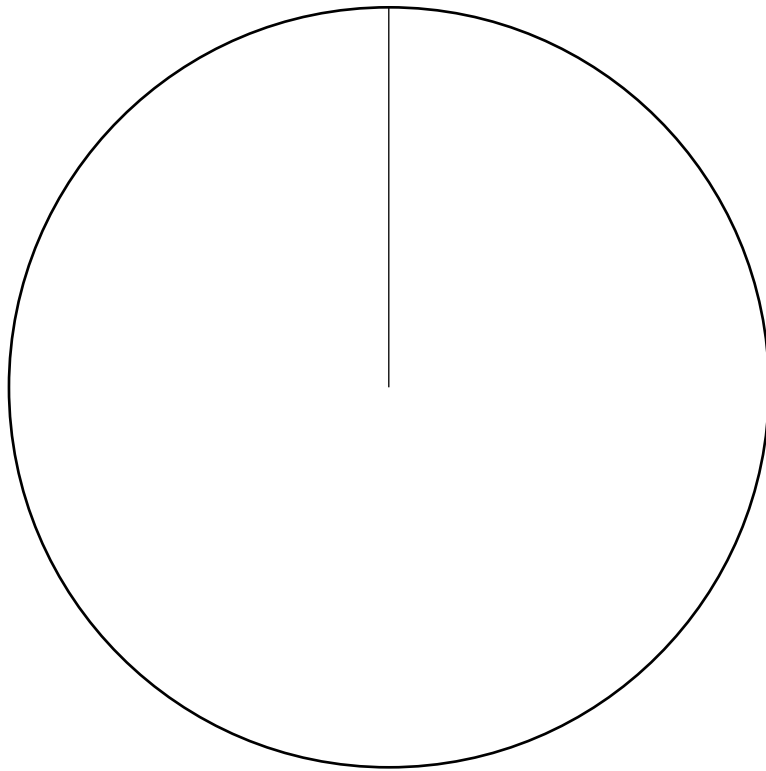
8

Turn over ▶

Do not write outside the box

20   Tom checks how many of his channel viewers are subscribers.

He finds that

number of **subscribers** : number of **non-subscribers** = 2 : 13

Draw and label a pie chart to show the subscription status of Tom's viewers.

[3 marks]

21 The first two terms of a sequence are shown below.

10   15   …   …

21 (a) Devon assumes it is a linear sequence.
Work out the next term of the sequence using Devon's assumption. **[1 mark]**

Answer _____

21 (b) Sarah assumes it is a geometric sequence.
Work out the next term of the sequence using Sarah's assumption. **[1 mark]**

Answer _____

21 (c) Morgan assumes it is a Fibonacci-type sequence.
Work out the next term of the sequence using Morgan's assumption. **[1 mark]**

Answer _____

6

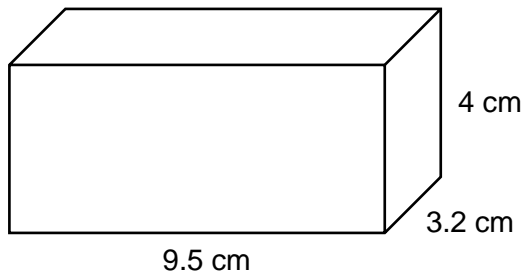**Turn over ▶**

22   Here is a cuboid made from metal.

4 cm

3.2 cm

9.5 cm

The mass of the cuboid is 1 kg.
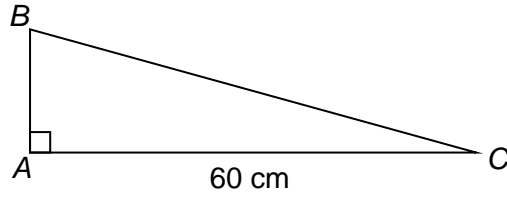Work out the density of the cuboid in g/cm^3 **[3 marks]**

Answer _____ g/cm^3

Do not write outside the box

23   Here is triangle *ABC*.

AC : *BC* = 3 : 4

Work out the length of *AB*   **[4 marks]**

Answer _____ cm

7

24   *ABCD* is a quadrilateral.
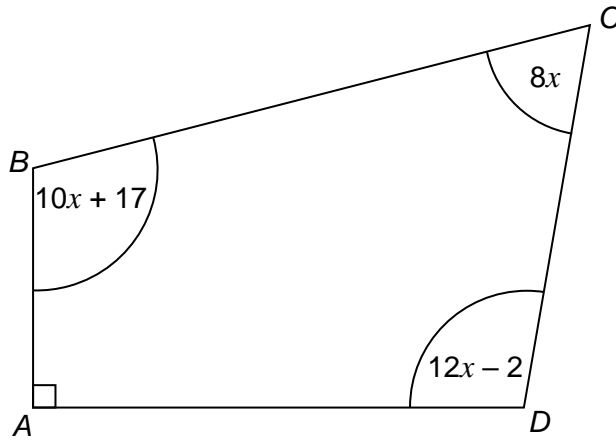
Work out the size of angle *BCD*.   **[4 marks]**

_____

_____

_____

_____

_____

_____

_____

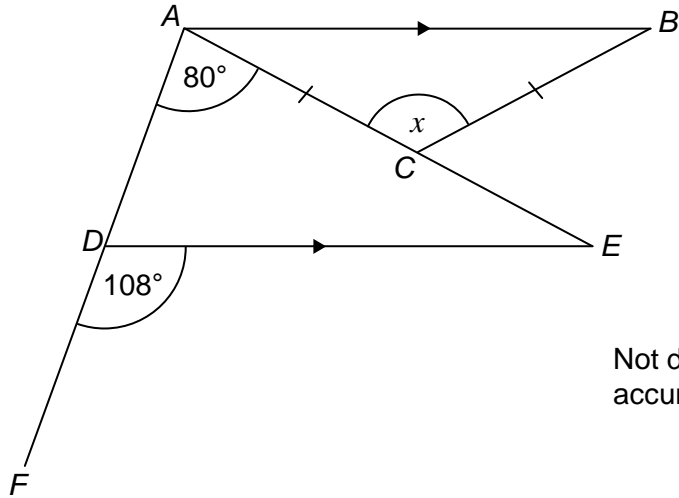_____

_____

_____

_____

°

Answer _____

Do not write outside the box

25

Not drawn accurately

ADF is a straight line.
Line *AB* is parallel to line *DE*.
AC = BC
Work out the size of the angle marked x
Give reasons for your answer.

[4 marks]

Answer _____ °

8

26 (a)   Simplify $(x^4)^5$ **[1 mark]**

Answer _____

26 (b)   Simplify $\dfrac{4y^{10}}{8y^{-2}}$ **[2 marks]**

Answer _____

END OF QUESTIONS

3