

Practice Examination

GCSE Mathematics

Foundation Tier

Non-calculator paper

Name

Class

TIME ALLOWED

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- You are **NOT** permitted to use a calculator in this paper.
- Do all rough work in this book.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets at the end of each question or part question on the Question Paper.
- You are reminded of the need for clear presentation in your answers.
- The total number of marks for this paper is **80**.
- All the questions on this paper have been chosen to be “non-calculator” questions. In this respect, the topics it includes may not fully reflect the balance or mix of topics tested on a typical paper.

Question	Mark	out of
1		1
2		1
3		1
4		1
5		5
6		3
7		2
8		3
9		3
10		1
11		1
12		3
13		3
14		3
15		5
16		2
17		2
18		5
19		6
20		3
21		3
22		3
23		5
24		6
25		5
26		1
27		3
Total		80

Answer **all** questions in the spaces provided

1 How many hours are there in a week?

Circle your answer.

[1 mark]

7

24

120

168

2 Give the value of $1 + 3 \times 5$

Circle your answer.

[1 mark]

9

15

16

20

3 What is the value of $0.8 - \frac{3}{4}$?

Circle your answer.

[1 mark]

0.05

0.5

0.1

0.75

4 What is the value of 2^3 ?

Circle your answer.

[1 mark]

5

6

8

23

5 (a) Work out $529 - 144 + 3271$.

[2 marks]

Answer _____

5 (b) Work out 48×27

[3 marks]

Answer _____

6 Julie has £320

She gives $\frac{1}{4}$ of this money to Stuart.

She gives 20% of this money to Sean.

The rest she keeps for herself.

How much does she keep for herself?

[3 marks]

Answer £ _____

7 Pratit has a piece of wood that is 2 metres long.

He cuts into two pieces, so that the ratio of their lengths is 3 : 5

What is the length of the shorter piece?

[2 marks]

Answer _____

- 8** Here is part of the timetable for trains running between Stockport and Greenbank.
Some trains do not stop at Navigation Road.

Stockport	2033	2110	2233	2327
Navigation Road	-	2129	-	2344
Knutsford	2059	2144	2259	2359
Greenbank	2115	2200	2315	0015

- 8 (a)** The journey from Knutsford to Greenbank always takes the same length of time.
How long is this?

[1 mark]

Answer _____ minutes

- 8 (b)** After an evening with his friend, Chris arrives at Navigation Road at 10:00 pm.
To get home he has to catch a train to Greenbank station.
He then has a ten minute walk to his house.

At what time will he arrive at his house?

Give your answer using the 12-hour clock format.

[2 marks]

Answer _____

9 By rounding each number to the nearest 10, estimate the answer to

$$\frac{38 \times 31}{\sqrt{402}}$$

You **must** show your working.

[3 marks]

Answer _____

10 Evaluate $17 \div 0.5$

[1 mark]

Answer _____

11 The ratio of girls to boys who are members of a youth club is 4 : 3

What fraction of the members are girls?

Circle your answer.

[1 mark]

$\frac{3}{4}$

$\frac{3}{7}$

$\frac{4}{3}$

$\frac{4}{7}$

12 In a football competition, goal difference is calculated using

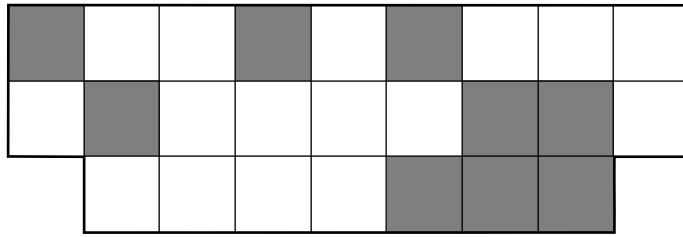
$$\text{goal difference} = \text{goals for} - \text{goals against}$$

Complete the table for these teams:

	goals for	goals against	goal difference
Rovers	31		13
Spurs		25	-11
Town	34	38	

[3 marks]

13



Shade in more squares in the shape so that
it has one line of symmetry
60% of the shape is shaded in.

[3 marks]

14 Evaluate $\frac{7}{8} \div \frac{5}{6}$

Give your answer as a mixed number in its simplest form.

[3 marks]

Answer _____

15

Chris sees these two offers for a rail ticket he wants to purchase.

Friendly Fares
Knutsford - Dewsbury and return
£22.40
plus booking fee of 5%

Travel Savers
Knutsford - Dewsbury and return
£21.00
plus booking fee of 12%

Compare the two offers.

Tick a box.

'Friendly Fares' is cheaper than 'Travel Savers'.

'Travel Savers' is cheaper than 'Friendly Fares'.

The cost for 'Friendly Fares' and 'Travel Savers' is the same.

You **must** show how you find your answer.

[5 marks]

16 You are told that $248 \times 137 = 33\,976$

16 (a) Write down the value of $24\,800 \times 1370$

[1 mark]

Answer _____

16 (b) Write down the value of $339.76 \div 0.248$

[1 mark]

Answer _____

17 Put these numbers in order.

$$\frac{3}{4}$$

0.8

$$\frac{5}{8}$$

65%

Start with the smallest.

[2 marks]

Answer _____ , _____ , _____ , _____

18 A sports club has prize money of £93.72 to divide between the 12 members of its team.

18 (a) Bill says “each member of the team should receive an equal share of the prize money”.

How much would each member of the team receive?

[2 marks]

Answer: each member receives £ _____

18 (b) Ben says “the captain should receive half the prize money, and the rest should be shared equally between the other members of the team”.

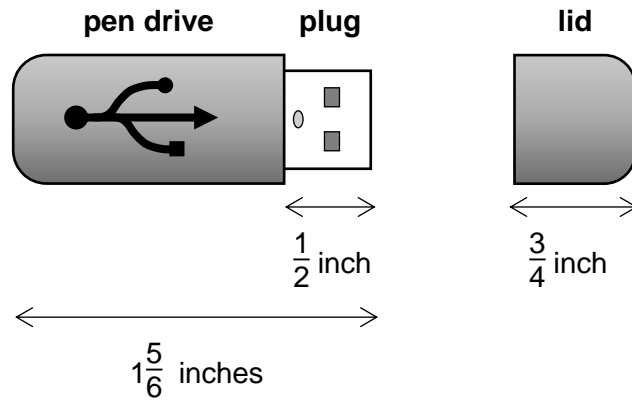
How much would each member of the team receive?

[3 marks]

Answer: Captain receives £ _____

others each receive £ _____

19 (a)



The diagram shows a pen drive and its lid. On one end of the pen drive is a plug.

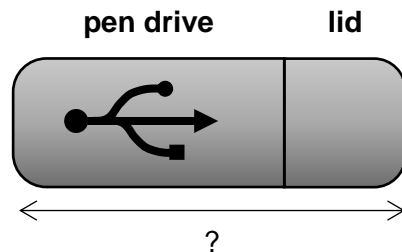
Together the pen drive and the plug are $1\frac{5}{6}$ inches in length.

The length of the plug is $\frac{1}{2}$ inch.

The length of the lid is $\frac{3}{4}$ inch.

The plug slots inside the lid for protection.

When it is in place, the lid completely covers the plug, as shown in the diagram.



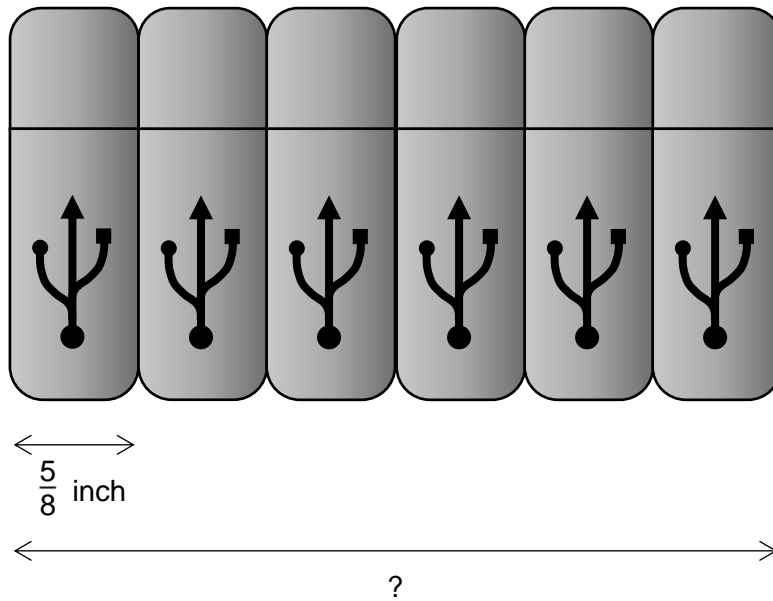
Find the total length of the pen drive and the lid when the lid is in place.

Give your answer, as a mixed number, in its simplest form.

[4 marks]

Answer _____ inches

19 (b)



Pen drives are sold in packs of six, as shown in the diagram.

Each pen drive is $\frac{5}{8}$ inch wide.

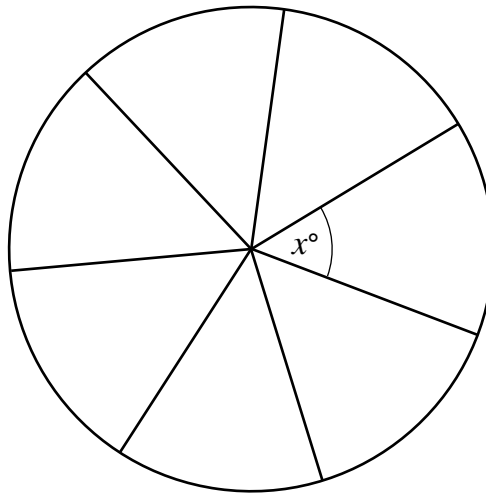
What is the total width of six pen drives?

Give your answer, as a mixed number, in its simplest form.

[2 marks]

Answer _____ inches

20



The diagram shows a framework made out of wire.

The circle has diameter 10 cm

The 7 straight lines all meet at the centre of the circle, and their ends are equally spaced around its circumference.

The angle between two of the straight lines is labelled x°

20 (a) What is the total length of wire used to make the framework?

Circle your answer.

[1 mark]

$(5\pi + 35)$ cm $(5\pi + 70)$ cm $(10\pi + 35)$ cm $(10\pi + 70)$ cm

20 (b) Find the size of angle x°

Give your answer as a mixed number, in its simplest form.

[2 marks]

Answer _____ °

21 Write the number 120 as a product of prime factors.

Give your answer in index form.

[3 marks]

Answer _____

22 A car travels 145 miles in 2 hours 30 minutes.

Find its average speed.

Give your answer in miles per hour.

[3 marks]

Answer _____ miles per hour

23 The table shows the numbers of siblings for each member of a class of 30 students.

Number of siblings	Number of students
0	8
1	7
2	$2x$
3	x
Total	30

Nobody in the class had more than three siblings.

23 (a) What is the value of x ?

[2 marks]

Answer _____

23 (b) Find the mean number of siblings for the students in this class.

Use a decimal in your answer.

[3 marks]

Answer _____

24 (a) Write the number two hundred and four thousand in standard form.

[2 marks]

Answer _____

The table gives information about some English counties.

Name of county	Area (in acres)
Bedfordshire	2.98×10^5
Essex	9.79×10^5
Norfolk	1.23×10^6
Rutland	9.75×10^4
Somerset	1.02×10^6
Yorkshire	3.69×10^6

24 (b) The area of which county is about 4 times that of Bedfordshire?

[2 marks]

Answer _____

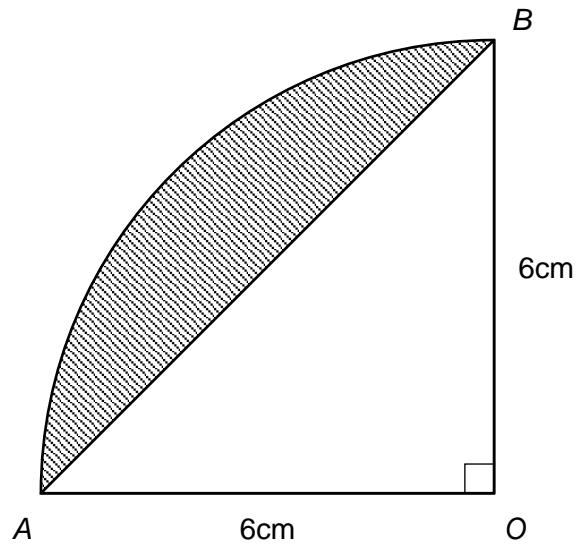
24 (c) The areas of which two counties are closest to each other?

[2 marks]

Answer _____ and _____

25 The diagram shows a segment of a circle with centre O .

AOB is a right angled triangle.
 A and B both lie on the circumference of the circle.



Find an expression, in terms of π , for the area of the segment, which has been shaded in the diagram.

[5 marks]

Answer _____ cm^2

26 What is the value of $\tan 45^\circ$?

Circle your answer.

[1 mark]

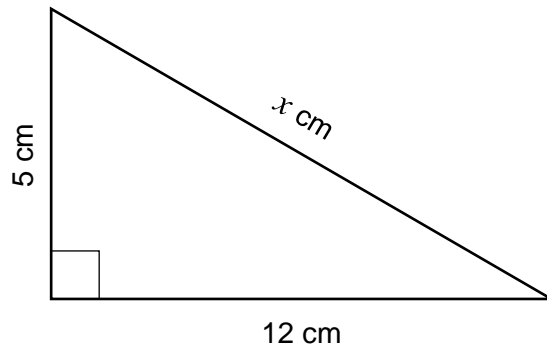
$$\frac{1}{\sqrt{2}}$$

1

$$\sqrt{2}$$

$$\sqrt{3}$$

27



Not drawn accurately

Find the value of x on this right angled triangle.

[3 marks]

Answer _____

There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**