the PiXL club
partners in excellence

Practice Paper
GCSE Mathematics (Edexcel style)
June 2018
Foundation Tier
Paper 3F

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 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**.

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

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

Question 1.

Work out

$$7 + 5 \times 8$$

....
(Total 1 mark)

Question 2.

Mark thinks of a number.

He multiplies this number by 2
He then subtracts 8
The result is 36

What number did Mark think of?

....
(Total 1 mark)

Question 3.

Simplify

$$7h + 10 - 5h$$

....
(Total 1 mark)

Question 4.

$\frac{3}{7}$ of the people at a theatre show are women.

$\frac{2}{7}$ of the people are children.

The rest of the people are men.

What fraction of the people are men.

....
(Total 1 mark)

Question 5.

Write the following in order of size.

Start with the largest number.

$$33\% \qquad 0.\dot{3} \qquad \frac{17}{50} \qquad 0.325 \qquad \frac{7}{20}$$

....

(Total 2 marks)

Question 6.

A bottle of jelly beans has a weight of 105g.

Some of the jelly beans are put into a small bottle.

The rest are put into a large bottle.

The jelly beans in the large bottle weighs 35g more than the jelly beans in the small bottle.

What is the weight of the jelly beans in the small bottle?

....g

(Total 2 marks)

Question 7.

The two-way table shows some information about the number of boys, girls and teachers at three different schools.

(a) Complete the two-way table.

	School A	**School B**	**School C**	**Total**
Boys	85	29	54	
Girls		31	47	171
Teachers	13	5		
Total	191			366

(3)

(b) One of the children is chosen at random.

What is the probability that this child is from School A?

....
(2)
(Total 5 marks)

Question 8.

There are 640 marbles in a bag.

Each marble is either blue, orange or red.

There are three times as many blue marbles as orange marbles, and 2 times as many red marbles as blue marble in the bag.

Ayyub takes 25% of the orange marbles from the bag.

Work out the ratio of the number of blue marbles to the number of orange marbles to the number of red marbles now in the bag.

Give your ratio in its simplest form.

....
(Total 4 marks)

Question 9.

Brian, Aadam and Aiysha are picking strawberries.

Brian picks 322 strawberries.

$\frac{2}{7}$ of these strawberries are ripe.

Aadam picks 200 strawberries.

24% of these strawberries are ripe.

Aiysha picks 440 strawberries.

15% of these are ripe.

Who picks the highest number of ripe strawberries?

You must show all your working out.

....
(Total 4 marks)

Question 10.

(*a*) Find the value of m^3 when $m = 4$

....
(1)

(*b*) Katie used a $20 bill to pay for a notebook that costs y dollars and a mouse that cost $3y$ dollars.

How much change did Katie receive from the cashier?

....
(2)
(Total 3 marks)

Question 11.

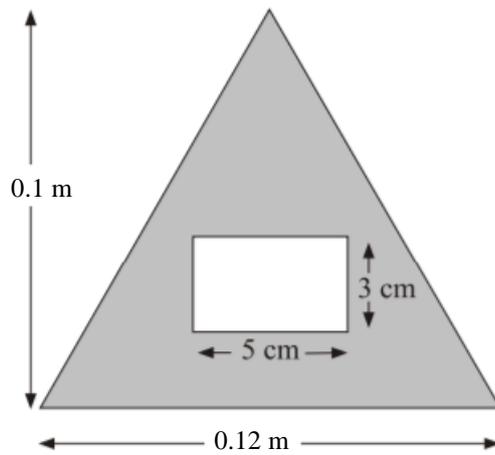450g of edam cheese and 350g of cheddar cheese cost a total of £8.89.

400g of cheddar cheese cost £3.68.

Work out the total cost of 200g of edam cheese and 550g of cheddar cheese.

£...
(Total 4 marks)

Question 12.

The diagram shows a rectangle inside a triangle.

The triangle has a base of 0.12 m and a height of 0.1 m.

The rectangle is 5 cm by 3 cm.

Work out the area of the region shown shaded in the diagram.

……………………………………..cm^2

(Total 4 marks)

Question 13.

A map has a scale of 1cm to 30 000m.

The distance between the cities of Birmingham and Edinburgh is 475km.

What is the distance on the map between these two cities?

Give your answer to 2 decimal places.

………………………………………..cm

(Total 3 marks)

Question 14.

(a) Write 2.543×10^5 as an ordinary number.

………………………………

(1)

(b) Write 0.00542 in standard form.

………………………………

(1)

(c) Calculate $(2.43 \times 10^7) \div (3.24 \times 10^{-4})$

Give your answer in standard form.

………………………………

(2)

(Total 4 marks)

Question 15.

(a) Factorise $15t - 30t^2$

....

(2)

(b) Solve $6(d - 4) = 60$

$d =$...

(2)

(Total 4 marks)

Question 16.

Find the total area of the shape

Give your answer to 3 significant figures.

....cm^2
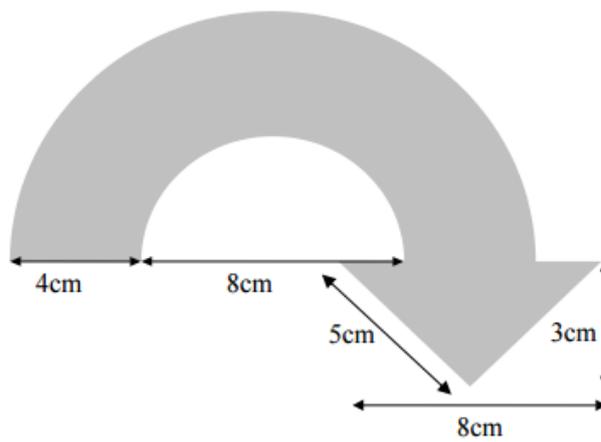
(Total 4 marks)

Question 17.

$-6 < n \leq 4$

n is an integer.

(a) Represent this inequality on a number line

……………………....................................
(2)

The area of the rectangle must be greater than the area of a triangle.

4

5*x* − 3

4

2*x* + 3
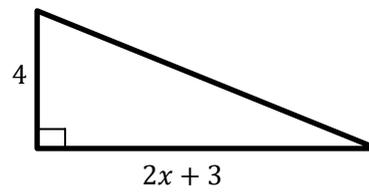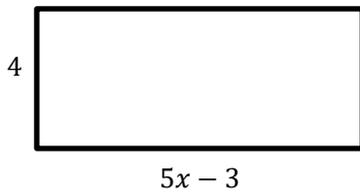
(b) Find the range of possible values of *x*.

……………………....................................
(3)
(Total 5 marks)

Question 18.

(a) Use your calculator to work out

$$\frac{9.3^2 + \sqrt{98.05}}{0.253}$$
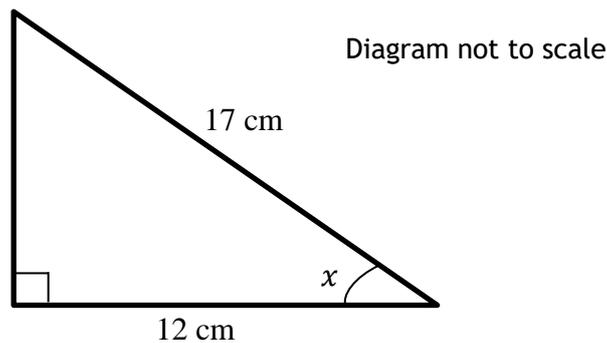
Write down all the digits on your calculator display.

....
(2)

(b) Write your answer to part (a) correct to 2 significant figures.

....
(1)
(Total 3 marks)

Question 19.

Diagram not to scale

17 cm

12 cm

x

Work out the value of x.
Give your answer correct to 2 significant figures.

$x = $ ....°
(Total 3 marks)

Question 20.

Sanjay is going on holiday to America.

The exchange rate is £1 = $1.45075

Sanjay changes £675 to dollars.

(*a*) Work out how many dollars he should get.

Give your answer correct to the nearest dollar.

…………….. dollars

(2)

(*b*) Is using £2 = $3 instead of using £1 = $ 1.45075 a sensible way for Sanjay to work out the cost of the trainers in pounds?

You must give a reason for your answer.

(1)
(Total 3 marks)

Question 21.

Norman bought a diamond ring for £6750.

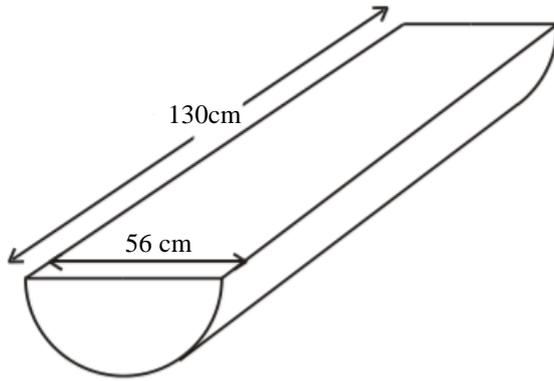In the first year the value of the ring depreciated by 3%.

In each of years 2 and 3 the value of the ring increased by 7%

Work out the value of the ring at the end of year 3.

Give your answer to 2 decimal places.

£…………………………………
(Total 3 marks)

Question 22.

The diagram shows a piece of wood.

The piece of wood is a prism of length 130 cm.

The cross-section of the prism is a semi-circle with diameter 56 cm.

Calculate the surface area of the piece of wood.

Give your answer correct to 1 decimal place.

…………………………….cm^2
(Total 4 marks)

Question 23.

Fiona has £5525, which she wants to invest for three years.

She is choosing between two savings accounts which each pay compound interest.

<table>
<tr>
<td>

Account 1

4.5% per annum

Fixed for 3 years

</td>
<td>

Account 2

Year 1: Interest rate 2.5%
Year 2: Interest rate 4.5%
Year 3: Interest rate 6.5%

</td>
</tr>
</table>

(a) Which account should she choose if she wants to receive the greatest possible amount of interest?

....

(Total 4 marks)

Question 24.

Solve the simultaneous equations

$$3x + 2y = 18$$
$$5x + 3y = 22$$

$x =$……………………………

$y =$……………………………

(Total 3 marks)

Question 25.

Mark measures the length, *l* cm, of a piece of wood as 19.8 cm correct to the nearest millimetre.

Write down the error interval for *l*.

…………………………………

(Total 2 marks)

Question 26.

The sum of two consecutive integers is 37.

Prove algebraically that the two consecutive numbers are 18 and 19?

……………… and ………………

(Total 3 marks)

TOTAL FOR PAPER IS 80 MARKS