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Pre Paper 2F Practice
June 2018
GCSE Mathematics (AQA style)

Foundation Tier
Calculator Practice 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 permitted to use a calculator in this paper.
- You may use the π button on your calculator or you may take the value of π to be 3.142.
- 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**.
- It is expected that you will need a calculator to answer every question on this paper. 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		4
6		3
7		1
8		1
9		2
10		5
11		4
12		5
13		4
14		4
15		3
16		3
17		3
18		3
19		3
20		7
21		3
22		4
23		5
24		6
25		3
Total		80

Answer **all** questions in the spaces provided

1 Use your calculator to divide 159.8 by 68.

What is the value of the digit 3 in the result?

Circle your answer.

[1 mark]

300 3 $\frac{3}{10}$ $\frac{3}{100}$.

2 How many minutes are there in 3 weeks?

Circle your answer.

[1 mark]

180 4320 10 080 30 240.

3 What is 2.0378 when it is rounded to 2 significant figures?

Circle your answer.

[1 mark]

2 2.0 2.03 2.04

4 Find the value of $19.71 - 16.47 \div 2.7$.

Circle your answer.

[1 mark]

1.2 3.24 13.61 25.81

5 The prices for delivering a parcel are based on its size and its weight.

		Size	
		Small	Large
Weight	Up to 500g	£10.99	£12.99
	501g up to 2kg	£16.99	£18.99
	Over 2kg	£24.99 (all sizes)	

5 (a) I have a small parcel that weighs 1.8kg.

How much will it cost to send it?

[1 mark]

Answer £ _____

5 (b) I have to send 3 books, each of which weigh 850g, to my friend.

I can send them as 3 small parcels, or together as a single large parcel.

How much would I save by sending them as a single large parcel, when compared to sending them as 3 small parcels?

[3 marks]

_____

_____

_____

_____

Answer £ _____

6 Here are all the entries on Brenda's bank statement for the week ending 26 October.

Three of the values are missing.

Complete the bank statement.

[3 marks]

Date	Item	Credit (£)	Debit (£)	Balance (£)
20 October	Starting balance			
21 October	Direct debit		132.47	
23 October	Card payment		39.95	−21.78
26 October	Wages	568.45		

7 Use the formula $y = a + bx$

to find the value of y if $a = 3.8$, $b = 2.4$ and $x = 6.5$.

Circle your answer.

[1 mark]

12.7 19.4 40.3 59.28

8 Work out $\sqrt{400 + 21^2}$.

Circle your answer.

[1 mark]

20 29 210.5 421

9 The circumference of a circle is 58cm.

What is its diameter?

[2 marks]

Answer _____ cm

10 (a) My train leaves Hartford at 06:55

I arrive at Guildford at 10:10.

How long, in minutes, does it take me to travel from Hartford to Guildford?

[2 marks]

Answer _____ minutes

10 (b) Guildford is 182 miles from Hartford.

What was the average speed of my journey?

Give your answer in miles per hour.

[3 marks]

Answer _____ mph

11 Here is Eric's payslip. His hourly rate of pay varies at different times of the week.

Complete Eric's payslip.

[4 marks]

Number of hours worked	Pay per hour	Pay
23	£9.58	**£**
14	£14.37	**£**
6	£19.16	**£**
Total pay		**£**

Deductions	
Income tax	£64.77
National Insurance	£18.31
Total deductions	**£**

Take home pay (total pay − total deductions)	**£**

12 Jo and Alan are given £2000. They decide to divide this money in the ratio of their ages. Jo is 28 years old and Alan is 36 years old.

12 (a) How much does Alan receive?

[2 marks]

12 (b) 9 years later, Jo and Alan are given some more money, and again divide this money in the ratio of their ages.

Alan receives the same amount of money as before.

How much money were they given altogether?

[3 marks]

Answer _____ %

13 Donald writes the number 2018 as the sum of two prime numbers.

One of Donald's numbers is between 540 and 550.

What are the two numbers?

[4 marks]

Answer _____ and _____

14 Zac buys a bicycle.

The bicycle costs £580.

To pay for the bicycle in 24 monthly instalments, the shop adds a charge for credit equal to 14% of the price of the bicycle.

How much will Zac pay each month for the bicycle?

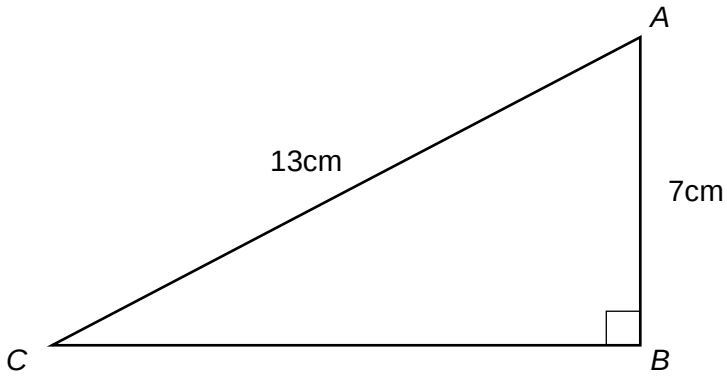
You **must** show your working.

[4 marks]

Answer £ _____

15 Find the length of the side *BC*.

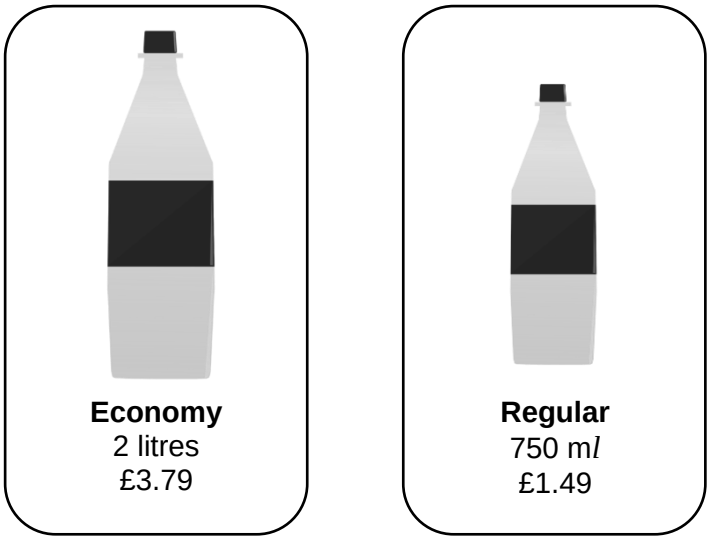
Give your answer to 1 decimal place.



[3 marks]

Answer _____ cm

16 Bottles of lemonade are sold in two sizes.



Which size represents the better value for money?

Tick a box.

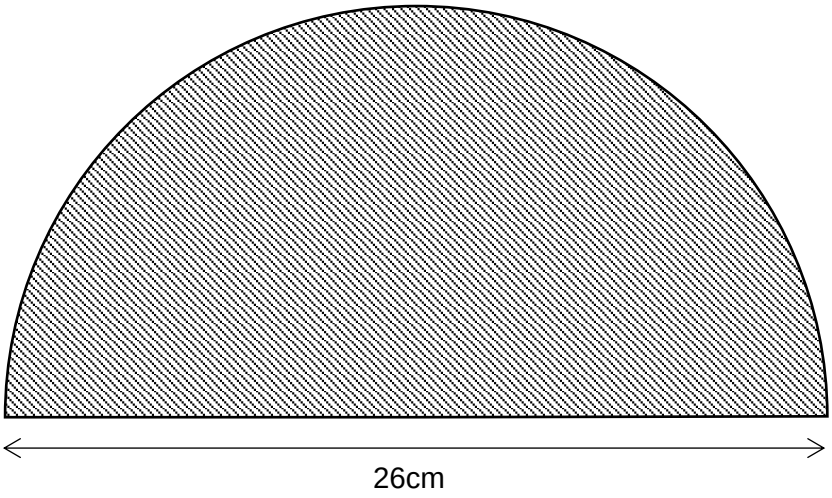
☐ The Economy bottle is better value for money.

☐ The Regular bottle is better value for money.

You must show your working out.

[3 marks]

17



The diagram shows a semicircle, with diameter 26cm.

Find its area.

[3 marks]

Answer _____ cm^2

18 There are 1400 students in a school.

650 are girls.

38% of the girls wear glasses.

32% of the students wear glasses.

What percentage of the boys wear glasses?

[3 marks]

Answer _____ %

19 In America, one gallon of petrol costs $5.68
In Britain, one litre of petrol costs £1.16

The exchange rate between American and British currency is £1 = $1.39.

1 gallon is the same as 4.546 litres.

Is petrol more expensive in America or in Britain?

Tick a box.

☐ Petrol is more expensive in America.

☐ Petrol is more expensive in Britain.

☐ The cost of petrol is the same in both countries.

You must show your working out.

[3 marks]

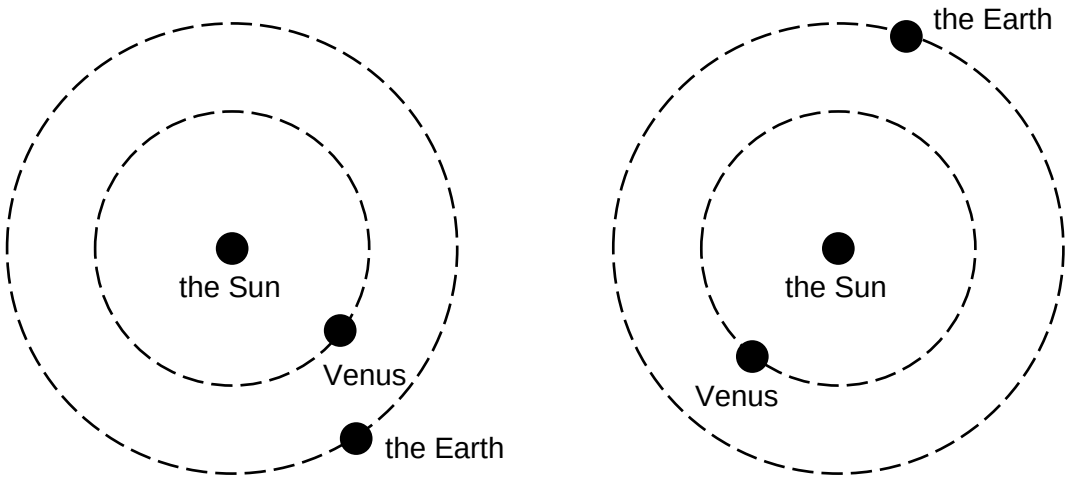
20 (a) Calculate the value of $\frac{1.72 \times 10^{-5}}{2.15 \times 10^{7}}$.

Give your answer in standard form.

[2 marks]

Answer _____

20 (b)



Venus and the Earth both travel around the Sun.
They travel at different speeds, so the distance between Venus and the Earth varies.

The distance from the Earth from the Sun is 9.3×10^{7} miles.
The distance from Venus to the Sun is 6.6×10^{7} miles.

20 (b) (i) What is the greatest possible distance between Venus and the Earth?

Give your answer in standard form.

[2 marks]

Answer _____ miles

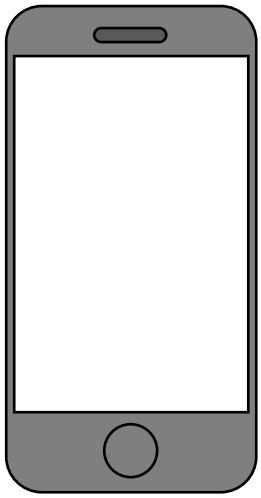
20 (b) (ii) The ratio between the smallest and greatest possible distances between Venus and the Earth is $1 : n$.

Find the ratio $1 : n$, giving the value of n to the nearest integer.

[3 marks]

Answer _____

21



The price of a smartphone is reduced by 32%.

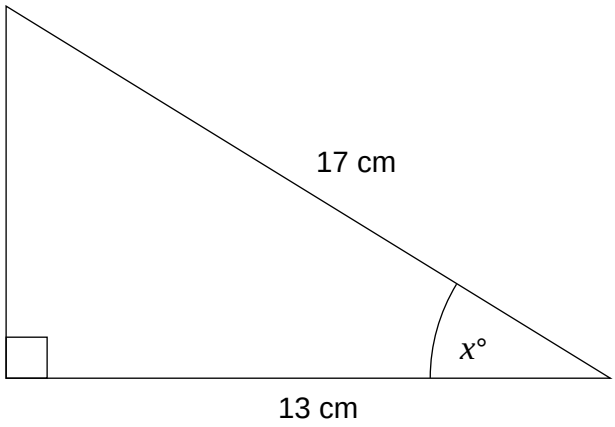
Its new price is £374.

What was its price before the reduction?

[3 marks]

Answer £ _____

22 (a) Use trigonometry to find the angle marked $x°$



Not drawn accurately

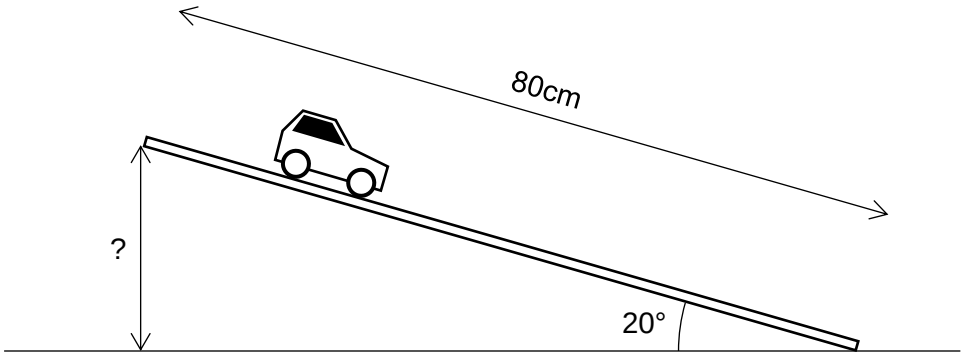
[2 marks]

Answer _____ °

22 (b) Amanda is playing with a toy car.

She has a length of wood that is 80cm long.

Amanda lifts one end of the length of wood so that the car will roll down it.



Amanda knows the car will roll down the slope if the angle of the slope is greater than 20°

How high must she lift the end of the length of wood make the car roll down the slope?

[2 marks]

Answer _____ cm

23 (a) Which of these calculations decreases 68 by 5%?

Circle your answer.

[1 mark]

68 × 5 68 × 0.95 68 ÷ 1.05 68 × 1.05

23 (b) £4000 is invested in a savings account.

During the first year, 2.7% interest is paid into the savings account.
At the end of the first year, the rate is reduced to 2%, compound interest.

How much interest is paid into the savings account during the first four years.

[4 marks]

Answer £ _____

24 Eggs are packed into cartons.

The table summarises the number of broken eggs in each carton.

Number of broken eggs in a carton	Frequency	
0	15	
1	20	
2	34	
3	3	
More than 3	0	

24 (a) Find the mean number of broken eggs in each carton.

[3 marks]

Answer _____ eggs

24 (b) What is the modal number of broken eggs in each carton.

Circle your answer.

[1 mark]

0 1 2 3

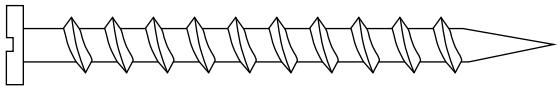
24 (c) If a carton contains more than 2 broken eggs, it is rejected.

What percentage of these cartons are rejected?

[2 marks]

Answer _____ %

25



The density of steel is 8.05 g/cm^3.

A pack of steel screws, all of which are identical, has a mass of 2kg.

There are 150 screws in the pack.

What is the volume of steel in each screw?

[3 marks]

Answer _____ cm^3

There are no questions printed on this page

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