



Name: .....

Video Solutions:



## MATHS FOR GRANTED EASTER GCSE MOCK EXAMINATIONS 2023

### PAPER 2 (Calculator) Foundation Tier Time: 1 hour 30 minutes

**You must have:** Ruler, protractor, pair of compasses, pen, HB pencil, eraser

#### Instructions

Use **black** ink or ball-point pen.

**Fill in your name** at the top of this page.

Answer **all** questions.

Answer the questions in the spaces provided.

**Calculators MAY be used.**

Diagrams are **NOT** accurately drawn, unless otherwise indicated.

You must **show all your working out.**

#### Information

The total mark for this paper is 80.

The marks for **each** question are shown in brackets.

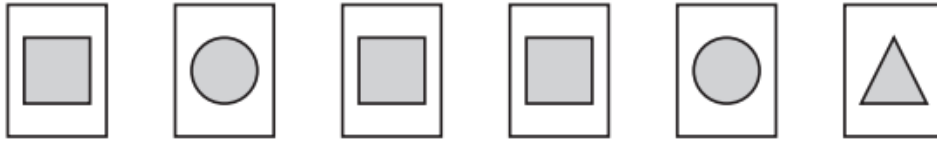
#### Advice

Read each question carefully and try to answer every question.

Keep an eye on the time and check your answers, if you have time, at the end.

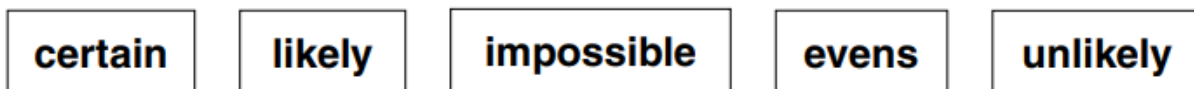
**Q1.**

Ria is playing a game to help learn the names of shapes.  
She has these 6 cards.



She picks one of these cards without looking.

Use one of these words to describe the probability of the events below.



(a) Ria picks a triangle.

.....

(b) Ria picks a hexagon.

.....

(c) Ria picks a square.

.....

**(Total for question = 3 marks)**

**Q2.**

(a) Simplify  $c + c + c$

.....  
(1)

(b) Simplify  $2e \times 3f$

.....  
(1)

(c) Simplify  $9p + 2t - 2p + 3t$

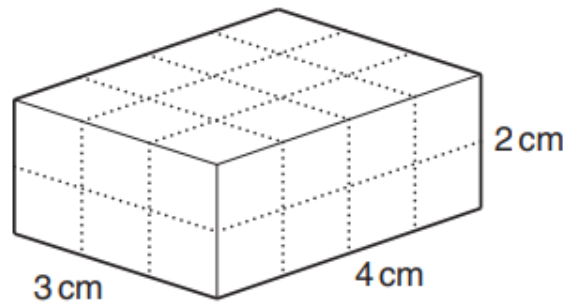
.....  
(2)

**(Total for question = 4 marks)**

**Q3.**

(a)

This diagram shows a cuboid of width 3 cm, length 4 cm and height 2 cm.



Find the volume of the cuboid.  
Give the units of your answer.

.....cm<sup>3</sup>  
(2)

(b) A swimming pool is in the shape of a cuboid.  
The swimming pool holds 480m<sup>3</sup> of water.  
The base of the swimming pool is a rectangle with width 12m and length 25m.

How deep is the water in the swimming pool?

.....m  
(2)  
**(Total for question = 4 marks)**

**Q4.** A cookery book gives the following rule for the length of time, in minutes, needed to roast a chicken.



How long will it take to roast a chicken that weighs 2.3 kilograms

.....minutes  
**(Total for question = 2 marks)**

**Q5.**

A bank uses a code on its computer.

To crack the code you need to find the two prime numbers which multiply together to make the code number.

For example,

for the code number 91, the two prime numbers that crack the code are 7 and 13, as  $7 \times 13 = 91$ .

What are the two prime numbers that crack the code for the following code numbers?

(i) 69

..... and .....

(ii) 85

..... and .....

**(Total for question = 2 marks)**

**Q6.**

Potatoes cost £9 for a 12.5 kg bag at a farm shop.

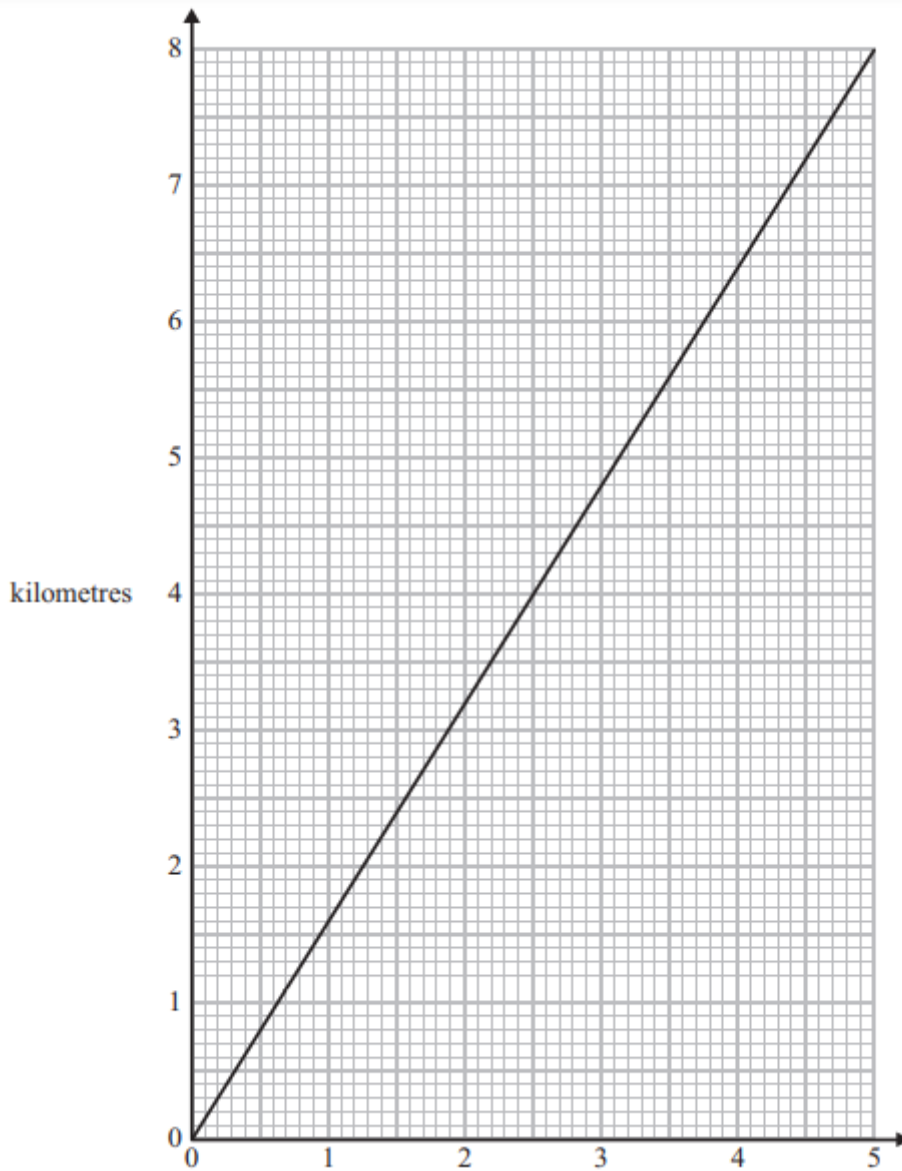
The same type of potatoes cost £1.83 for a 2.5 kg at a supermarket.

Where are the potatoes the better value, at the farm shop or at the supermarket?

You must show your working.

.....  
**(Total for question = 4 marks)**

**Q7.** You can use the graph to change between miles and kilometres.



(a) Change 3 miles into kilometres.

.....kilometres  
(1)

(b) Change 60 kilometres into miles.

.....miles  
(2)

**(Total for question = 3 marks)**

**Q8.** Michael writes down 4 different factors of 60  
He adds the 4 factors together.  
He gets a number greater than 20 but less than 35  
  
What 4 factors could Michael have written down?

.....  
**(Total for question = 3 marks)**

**Q9.** Solve.

(a)  $\frac{y}{5} = 20$

.....  
(1)

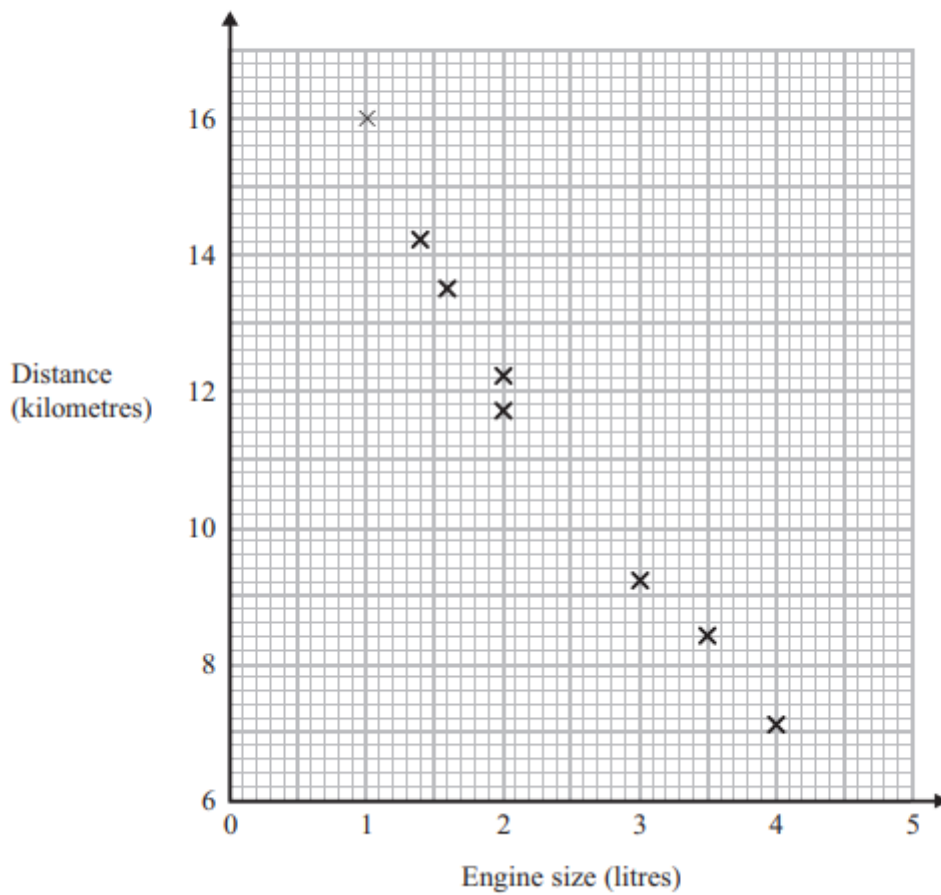
(b)  $3p + 6 = p + 18$

.....  
(3)  
**(Total for question = 4 marks)**

**Q10.**

The scatter graph shows some information about 8 cars.

For each car it shows the engine size, in litres, and the distance, in kilometres, the car travels on one litre of petrol.



(a) What type of correlation does the scatter graph show?

.....  
(1)

A different car of the same type has an engine size of 2.5 litres.

(b) Estimate the distance travelled on one litre of petrol by this car.

.....km  
(2)  
**(Total for question = 3 marks)**

**Q11.** Pat and Julie share some money in the ratio 2 : 5  
Julie gets £45 more than Pat.

How much money did Pat get?

£.....  
**(Total for question = 3 marks)**

**Q12.**

Linda is going on holiday to the Czech Republic.  
She needs to change some money into koruna.

She can only change her money into 100 koruna notes.

Linda only wants to change up to £200 into koruna.  
She wants as many 100 koruna notes as possible.

The exchange rate is £1 = 25.82 koruna.

(a) How many 100 koruna notes should she get?

Linda buys a meal in the Czech Republic.  
The meal costs 400 koruna.

(b) Work out the cost of the meal in pounds.

.....  
(3)

£.....  
(3)  
**(Total for question = 6 marks)**



**Q13.**

Mr Weaver's garden is in the shape of a rectangle.

In the garden

there is a patio in the shape of a rectangle  
and two ponds in the shape of circles with diameter 3.8 m.

The rest of the garden is grass.

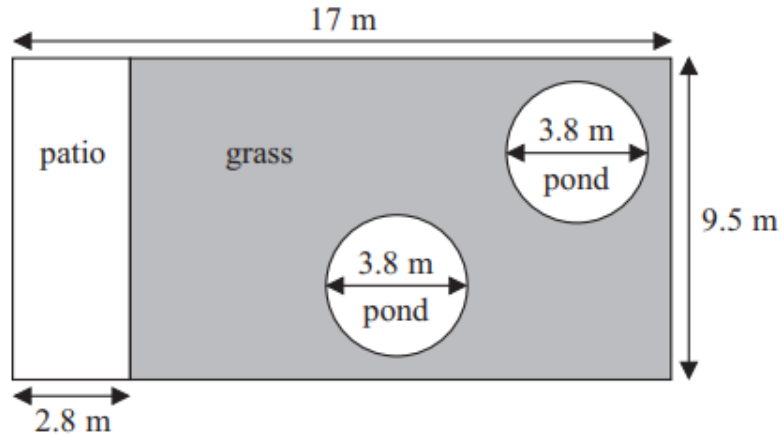


Diagram **NOT**  
accurately drawn

Mr Weaver is going to spread fertiliser over all the grass.

One box of fertiliser will cover  $25 \text{ m}^2$  of grass.

How many boxes of fertiliser does Mr Weaver need?

You must show your working.

.....  
(Total for question = 5 marks)

**Q14.**

Complete the two-way table.

	blue eyes	brown eyes	green eyes	total
boys	5		4	12
girls		7		
total			9	30

**(Total for question = 3 marks)**

**Q15.**

Ping chooses four numbers.

The mode of these four numbers is 8, the range is 7 and the mean is 11.

Find Ping's four numbers.

....., ....., ....., .....

**(Total for question = 3 marks)**

**Q16.**

The length of each side of a regular pentagon is 8.4 cm to 1 decimal place.

(a) Complete the error interval for the length of one side.

.....cm  $\leq$  length  $<$  ..... cm

(2)

(b) Complete the error interval for the perimeter.

.....cm  $\leq$  perimeter  $<$  .....cm

(1)

**(Total for question = 3 marks)**

**Q17.** The cost of a ticket increases by 10% to £19.25.

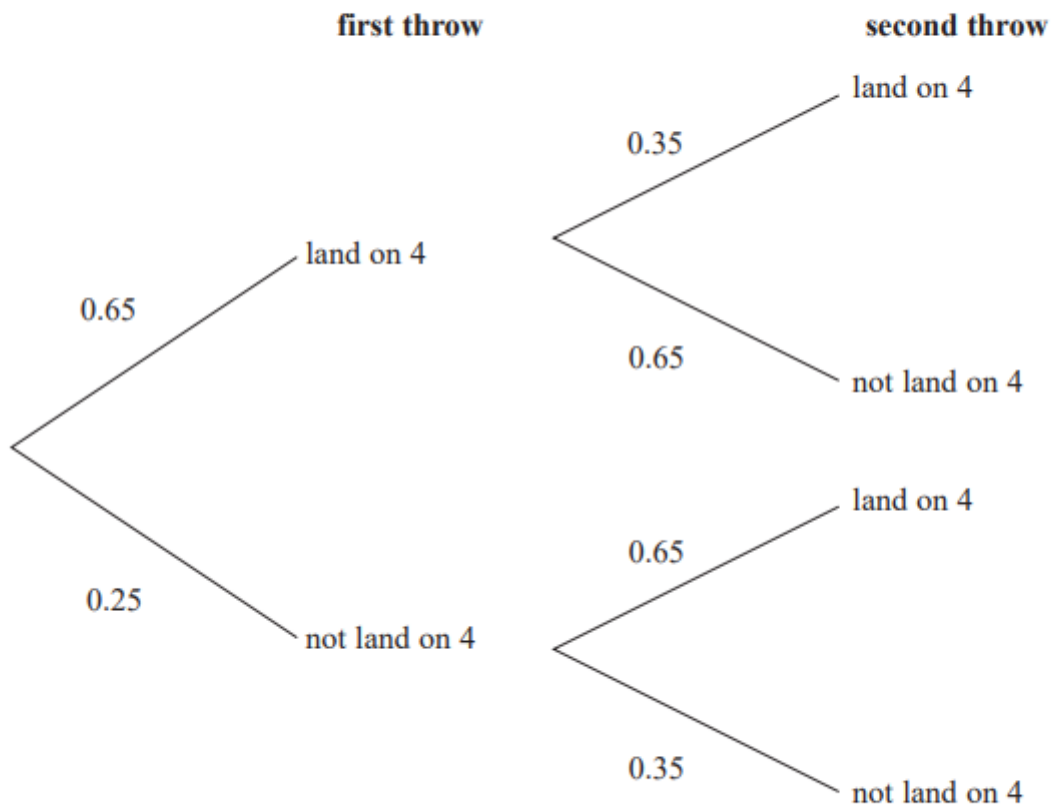
Work out the original cost.

£.....  
**(Total for question = 3 marks)**

**Q18.**

When a biased 6-sided dice is thrown once, the probability that it will land on 4 is 0.65  
The biased dice is thrown twice.

Amir draws this probability tree diagram.  
The diagram is **not** correct.



Write down **two** things that are wrong with the probability tree diagram.

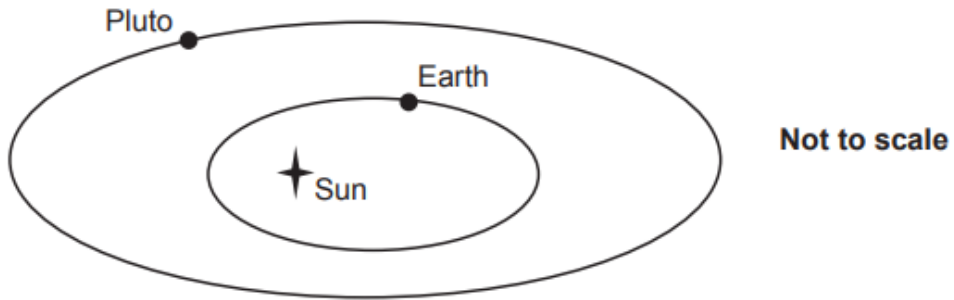
1).....

2).....

**(Total for question = 2 marks)**

**Q19.**

Earth and Pluto go around the Sun.  
Their distance to the Sun varies.



The table shows the closest distance that Earth and Pluto get to the Sun.

	<b>Closest distance to the Sun (km)</b>
Earth	$1.47 \times 10^8$
Pluto	$4.44 \times 10^9$

- (a) Show that the closest distance of Pluto to the sun is roughly 30 times the closest distance of Earth to the Sun.

(2)

- (b) Give a reason why we **cannot** use this information to say

**The distance of Pluto to the Sun is always  
30 times the distance of Earth to the sun.**

(1)

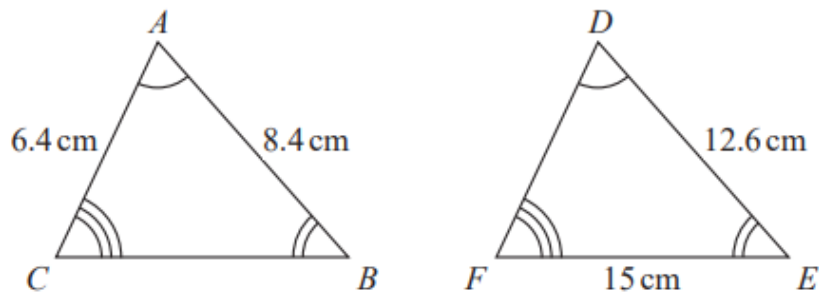
**(Total for question = 3 marks)**

**Q20.** Solve  $8 > 3 - \frac{1}{2}x$

.....  
**(Total for question = 2 marks)**

**Q21.**

Triangle *ABC* and triangle *DEF* are similar.



(a) Work out the length DF.

.....cm  
(2)

(b) Work out the length of CB.

.....cm  
(2)  
**(Total for question = 4 marks)**

**Q22.**

A bee flies from its hive to a flower at a constant speed of 7.5 metres per second for 10 seconds.

The bee then takes 15 seconds to fly back to the hive.

Assume the bee always flies in a straight line.

- (a) Ignoring the time spent at the flower, work out the **overall** average speed of the bee in its flight from the hive to the flower and back.

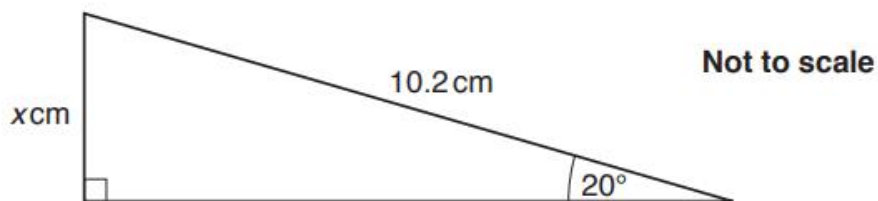
.....metres per second.  
(4)

- (b) If the bee is not assumed to fly in a straight line, how might your answer be affected?

(1)  
**(Total for question = 5 marks)**

**Q23.**

Here is a right-angled triangle.

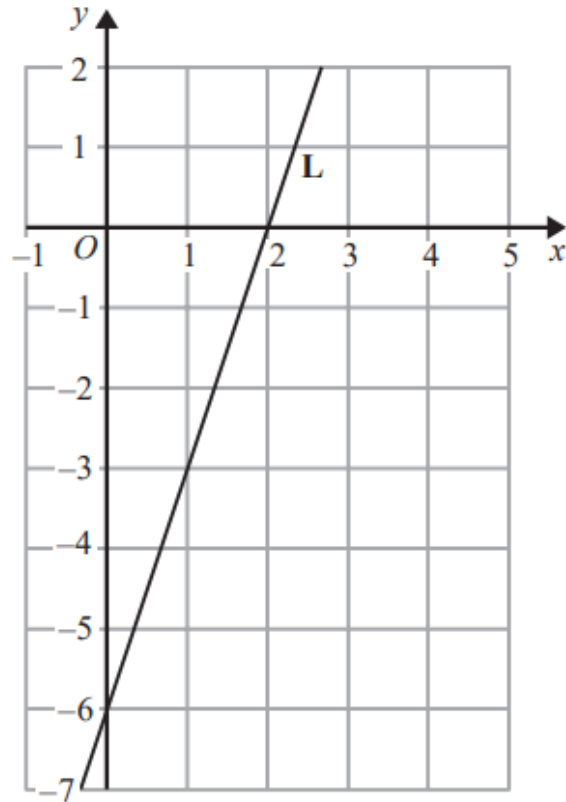


Use trigonometry to work out the value of  $x$ .

$x = \dots\dots\dots$ cm  
**(Total for question = 3 marks)**

**Q24.**

The line **L** is shown on the grid.



Find an equation for **L**.

.....

(Total for question = 3 marks)

**TOTAL FOR PAPER IS 80 MARKS**