TQUK Functional Skills Qualification in Maths at Level 2

Examination Past Paper 8

Please complete the details below using black or blue ink. Use BLOCK CAPITALS.

Learner Name: _____

Learner Number: _____

Date: _____

Centre Name: _____

Instructions:

- read each question **carefully**
- answer **all** questions
- write your answers **clearly** in the spaces provided
- **check** your answers.

Information:

- this examination has **two** sections. These are clearly labelled
- you are **not allowed** to use a calculator for Section A
- you **are allowed** to use a calculator for Section B
- the **maximum** mark for this examination is 60
- the marks available for each question are shown in **bold** beneath each question.

Items:

- you **will need** a pen with black or blue ink, a pencil, a ruler and an eraser (for diagrams, graphs and charts only)
- you **will need** a basic calculator for Section B only
- you **will need** a protractor
- you **will not** need any other stationery or equipment.

Time allowed:
30 minutes for Section A (Non-calculator)
90 minutes for Section B (Calculator)

Do not open this examination paper until you are told to do so.

For examiner use only

	Marks available	Marks awarded	Second marks
Section A	15		
Section B	45		
Total marks	60		

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Section A: Non-calculator

There are **15 marks** available in this section.
You must **not** use a calculator in this section.
You will have **30 minutes** to complete this section.

1. Work out 5.817 – 2.75

Answer	

[1]

2. Work out 4 × 3.145

Answer	

[1]

Questions continue on the following page

3. Convert 12 kilometres into miles.

Use 1.6 kilometres = 1 mile

Answer	**miles**

[2]

4. There are 824 students at a school.

112 of them are in their final year.

One student is chosen at random.

What is the probability that this student is in their final year?

Give your answer as a fraction in its simplest form.

Answer	

[2]

5. Morgan is the manager of a concert arena.

The number of tickets sold in two years is shown:

Year 1:	**Year 2**:
784 693 tickets	523 154 tickets

Morgan thinks that the total number of tickets sold in these two years is more than 1 400 000

Is Morgan correct?

Show how you decide.

Answer	

[2]

Questions continue on the following page

6. Work out the original cost of this television:

Television
20% off
Now only £240

Answer	**£**

[2]

7. Work out:

$8\frac{1}{4} + 6\frac{1}{5}$

Give your answer as a mixed number.

Answer	

[2]

8. Dua is going to make a gold bracelet using 50 cubic centimetres (cm^3) of liquid gold.

Dua knows the density of gold is 19.3 g/cm^3.

How many grams of gold will Dua need to make the bracelet?

Use: $\text{Density} = \frac{\text{mass}}{\text{volume}}$

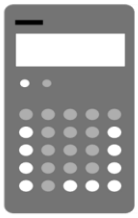
Answer	**grams**

[3]

End of Section A.

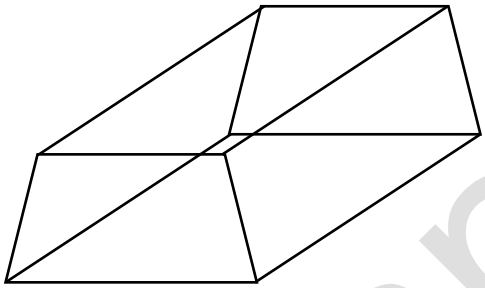
Section B begins on Page 7.

Section B: Calculator



There are **45 marks** available in this section.
You **can** use a basic calculator in this section.
You will have **90 minutes** to complete this section.

1. What is this shape?



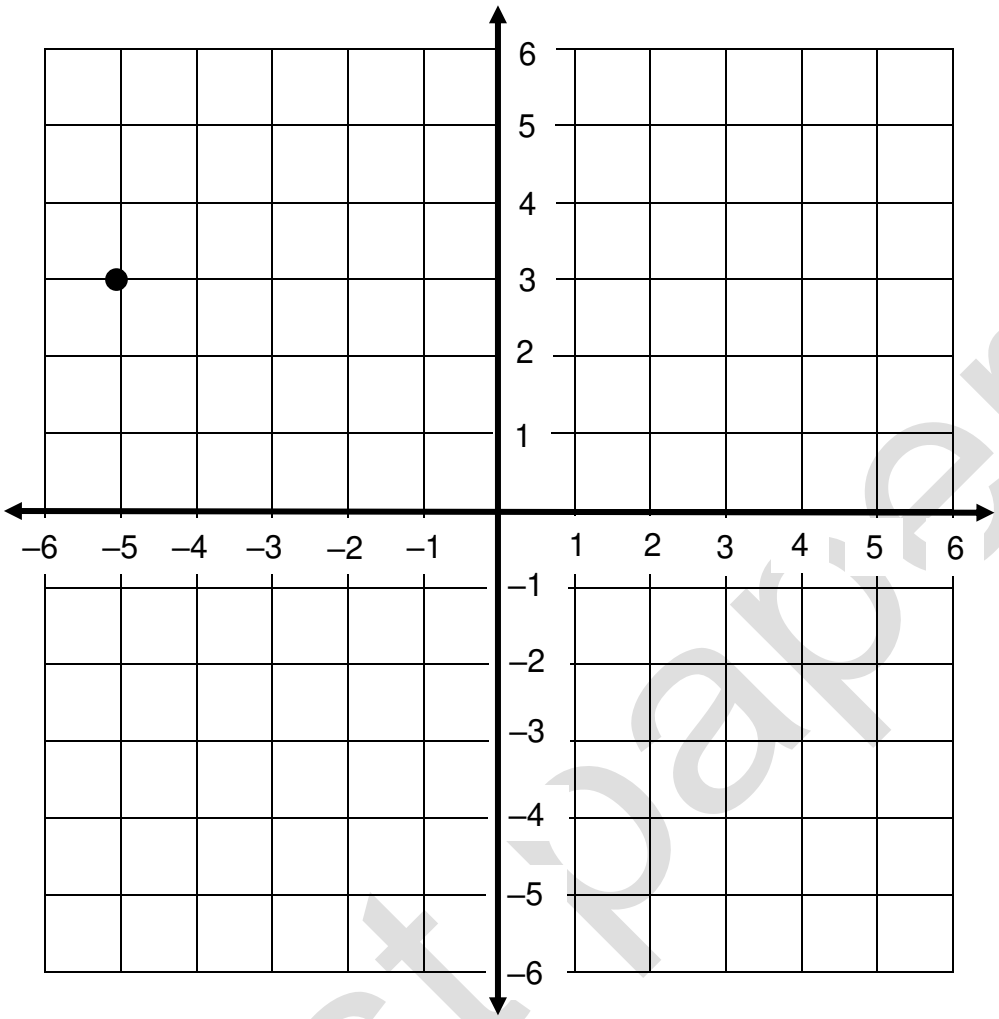
a) Pyramid	**b)** Trapezium
c) Cuboid	**d)** Prism

Answer	

[1]

Questions continue on the following page

2. Write down the coordinates of the point plotted on the grid.



Answer	(,)

[1]

3. Zola wants a new sofa.

Zola can choose either a grey or blue sofa.

Both sofas have the same original price.

Grey sofa	**Blue sofa**
$\frac{1}{9}$ off	12% off

Which sofa has the bigger discount?

Show how you decide.

Answer	

[2]

Questions continue on the following page

4. Work out:

$$\frac{4^2 + 40 \div 2}{15 - 3 \times 4}$$

Show your working.

Answer	

[2]

5. A local farm sells milk in glass bottles for £0.80 per pint.

The farm increases the price to £1.00 per pint.

Work out the percentage increase in price.

Answer	**%**

[2]

6. Tai needs their house painted within 10 days.

It will take 3 painters 6 days to paint the house.

Will 2 painters working at the same rate get the house painted within 10 days?

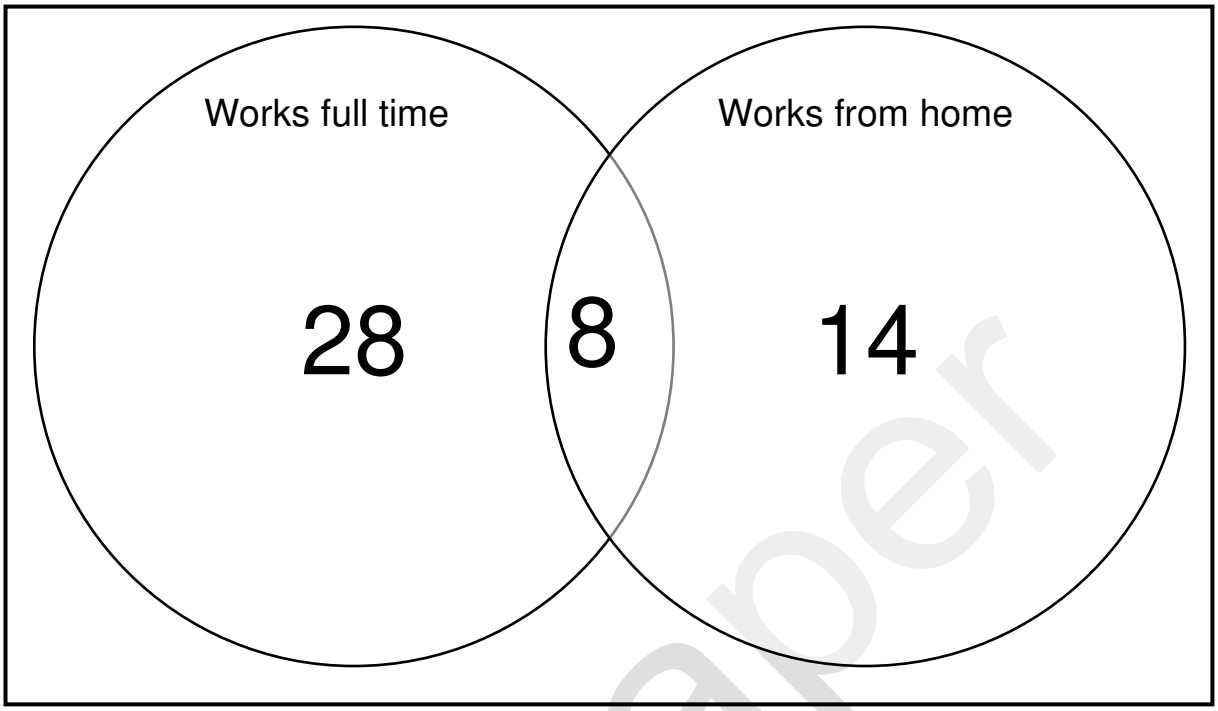
Show how you decide.

Answer	

[2]

Questions continue on the following page

7. The Venn diagram shows the working patterns of a group of employees.



One of these employees is chosen at random.

What is the probability that this employee works full time?

Give your answer as a decimal **and** a percentage.

Answer	a) Decimal:	b) Percentage:

[3]

8. Harper walks 15 kilometres in 200 minutes.

Harper thinks this is 4.2 kilometres per hour (kph).

Is Harper correct?

Show how you decide.

	Answer	**kph**

[3]

Questions continue on the following page

9. Charu needs to estimate the curved surface area of a hemisphere.

Charu knows:

- the radius of the hemisphere is 9 cm
- $\pi = 3.14159$

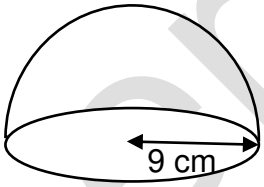
Charu rounds π to the nearest whole number to estimate the curved surface area.

What answer should Charu get?

Use:

$$A = \frac{4\pi r^2}{2}$$

Where:
A = curved surface area of sphere
r = radius of hemisphere



Not drawn to scale

Show your working.

Answer	**cm²**

[3]

10. Drew needs to order 200 paper cups for a party.

Drew needs small, medium and large cups in the ratio 14 : 4 : 2

Drew thinks there will be 108 more small cups than large cups.

Is Drew correct?

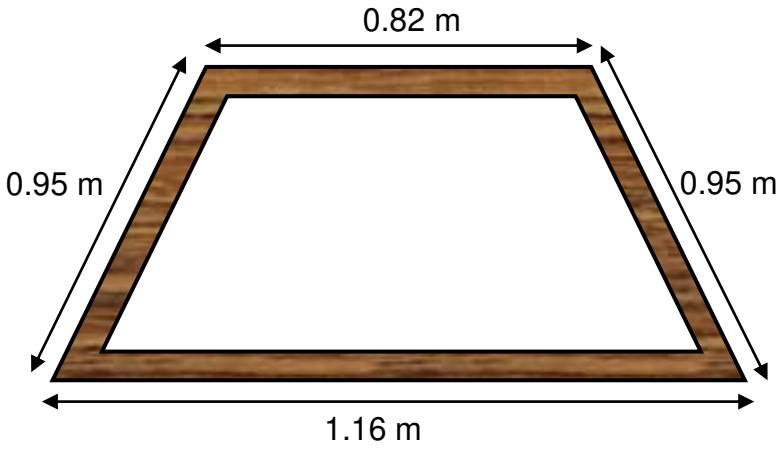
Show how you decide.

Answer	

[3]

Questions continue on the following page

11. Kai wants to make a wooden picture frame with the dimensions shown below:



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Kai wants to buy 14% more wood than needed to allow for any mistakes.

Kai buys 4.5 metres of wood.

Has Kai bought enough wood?

Show your working.

Answer	

[4]

12. Billie owns a café. Deepal is the café manager.

The table shows how many customers the café had over two weeks.

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Week 1	22	38	46	30	44
Week 2	23	40	45	42	20

Deepal thinks that on average there were more customers per day on week 1.

Billie disagrees.

Show how **both** could be correct.

Show your working.

Give reason here:

[4]

Questions continue on the following page

13. Ashley wants to buy a motorbike for £9750

Ashley paid £5000 into a new savings account two years ago.

The savings account paid 4% compound interest per year.

Ashley will use all the money in the savings account as a deposit towards the motorbike.

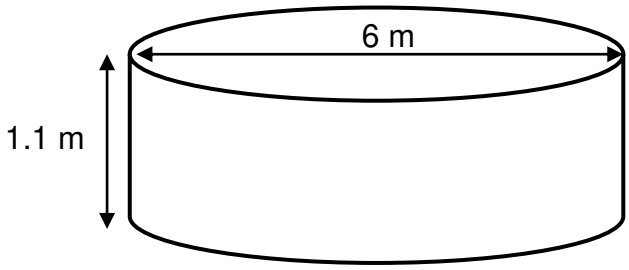
The rest will be paid in 40 equal monthly payments.

How much will each monthly payment be?

Answer	**£**

[4]

14. Taylor has a fishpond in the shape of a cylinder.



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Taylor uses this formula to work out how many fish can be put into the pond.

Maximum number of fish = $\frac{\text{volume (in m}^3\text{) of pond multiplied by 220}}{1000}$

What is the maximum number of fish Taylor can put in the pond?

Use $\pi = 3.14$

Answer	**fish**

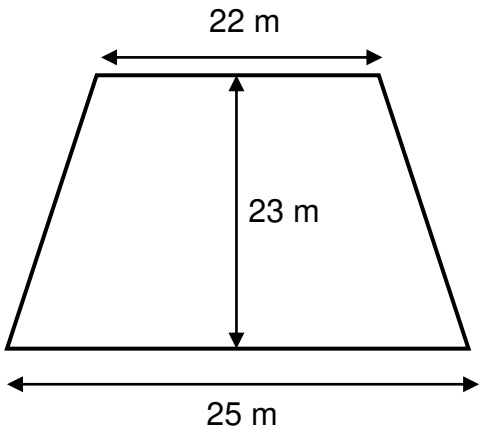
[5]

Questions continue on the following page

15. Amory has turned a barn into an event venue.

Amory wants to estimate how much money the venue can be rented out for.

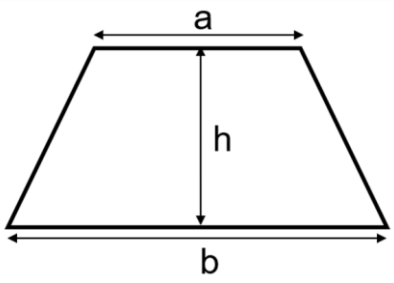
The floor plan of the venue is shown below:



Not drawn to scale

Use:

$$Area = \frac{(a+b)h}{2}$$



Amory estimates that one person will require 2.6 m^2 of floor space.

Amory finds these prices other local venues charge.

Venue	A	B	C	D	E
Price per person	£20	£35	£45	£30	£50

Amory will charge the median price.

What is the maximum amount of money Amory can expect to make?

Show your working.

Answer box is on the following page

Answer	**£**

[6]

This is the end of the assessment.