TQUK Functional Skills Qualification in Maths at Level 2

Examination Past Paper 2

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 basic 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 and a compass
- 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 9.028 – 0.17

Answer	

[1]

2. Work out 24.108 ÷ 4

Answer	

[1]

Questions continue on the following page

3. 50 people are asked what pets they own.

The results are shown below:

	Rabbit	**Cat**
Dog	16	24
Fish	2	8

One person is chosen at random.

What is the probability that the person chosen has a dog and a cat?

Give your answer as a decimal.

Answer	

[2]

4. The mass of a sphere is 1800 grams (g).

The volume of the sphere is 450 cm^3

Work out the density of the sphere.

Answer	

[2]

5. Jesse is the manager of an aquarium.

The table below shows how many people visited the aquarium over 3 years:

Year	Number of people
2019	568 750
2020	128 528
2021	482 935

Jesse thinks that more than 1 200 000 people visited the aquarium during the 3 years.

Is Jesse correct?

Show how you decide.

Answer	

[2]

6. Work out 1.324 + 2.206 + 14.75

Answer	

[2]

Questions continue on the following page

7. Work out:

$$\frac{3}{20} + \frac{17}{15}$$

Give your answer as an improper fraction.

Answer	

[2]

8. Riley's annual salary is £32 000 before tax.

Riley knows that:

- £12 570 will be tax free
- 20% tax will be deducted from the amount above £12 570

How much will the annual salary be after tax has been deducted?

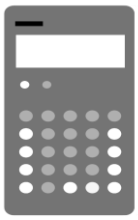
Answer	**£**

[3]

End of Section A.

Section B begins on Page 6.

Section B: Calculator



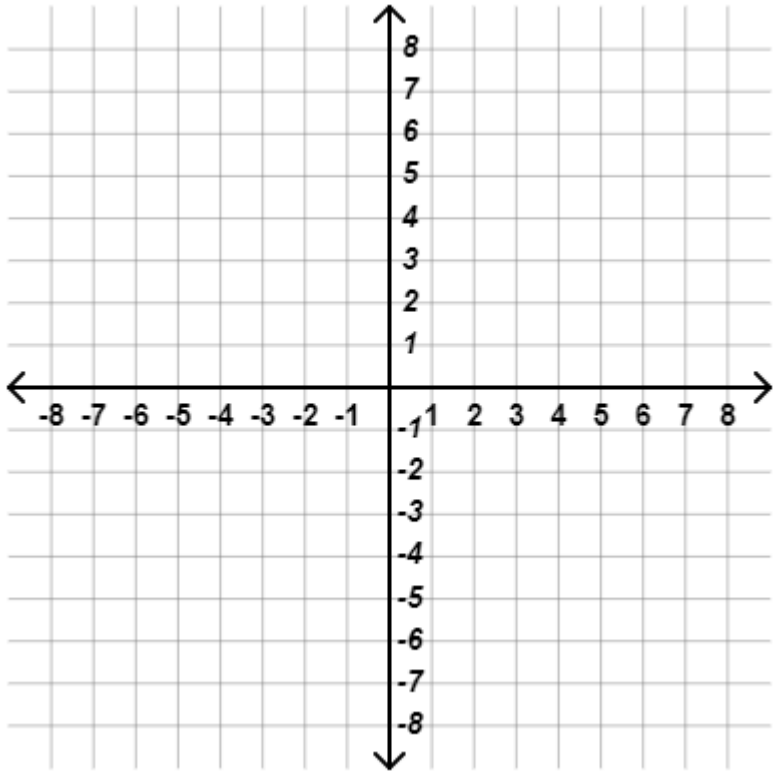
There are **45 marks** available in this section.
You **can** use a basic calculator in this section.
You will have **90 minutes** to complete this section.

1. Write 13 000 000 000 in words.

Answer	

[1]

2. Plot the point (6, –3) on this coordinate grid:



[1]

3. At football training, a footballer has 56 shots at goal and scores 42 times.

The football coach thinks that the footballer scored $\frac{7}{8}$ of the shots.

Has the coach worked out the correct fraction?

Show how you decide.

Answer	

[2]

4. Work out:

$$\left(\frac{25+5\times3}{10^2}\right)$$

Give your answer as a decimal.

Answer	

[2]

Questions continue on the following page

5. 3480 people visited a museum in July.

5150 people visited the same museum in August.

Calculate the percentage change in the number of people from July to August.

Answer	**%**

[2]

6. Leslie is planning a road trip.

The scale on the map is 1 : 75 000

The distance Leslie wants to travel represents 11 centimetres (cm) on the map.

Leslie calculates this to be 82.5 kilometres (km).

Is Leslie correct?

Show how you decide.

Answer	

[2]

7. Nicky's homemade pillowcases are made using a piece of fabric two metres square.

Each time a pillowcase is made, 0.135 square metres of fabric is wasted.

Nicky wants to **estimate** what percentage of the total fabric is wasted.

Nicky rounds 0.135 to one decimal place.

Using the rounded value, what percentage should Nicky get?

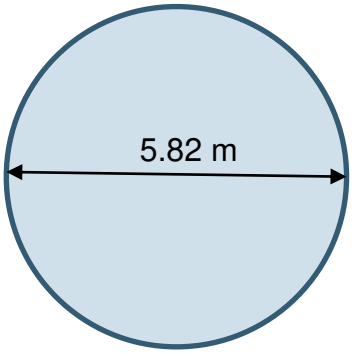
Show your working.

Answer	**%**

[3]

Questions continue on the following page

8. Charlie wants to put a safety rope around this pond:



Not drawn to scale

Charlie thinks the total length of rope needed will be more than 18.5 metres (m).

Is Charlie correct?

Show how you decide.

Use $\pi = 3.14$

Answer	

[3]

9. Harper paid £12 500 into a new savings account 2 years ago.

The savings account paid 3% compound interest per year.

Harper wants to buy a new car for £18 750

Harper puts all the money in the savings account towards the new car.

How much more money is needed to pay for the car?

Answer	**£**

[3]

Questions continue on the following page

10. Alex needs to know what time to leave home to get to a dentist appointment by 10:40 am.

Alex can cycle at an average speed of 12 miles per hour.

The dental surgery is 15 miles from Alex's house.

What is the **latest** time Alex can leave home to cycle to the appointment?

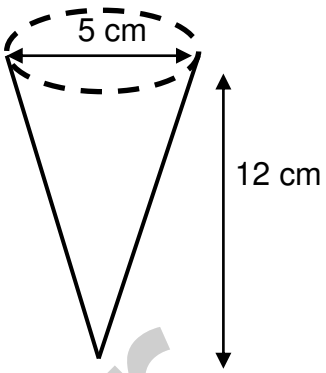
Answer	**am**

[3]

11. Taylor is going to fill a cone with strawberry and vanilla ice-creams.

Taylor will use strawberry and vanilla in the ratio 2 : 3

How much of each flavour will Taylor need?



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Use:

$$v = r^2 h$$

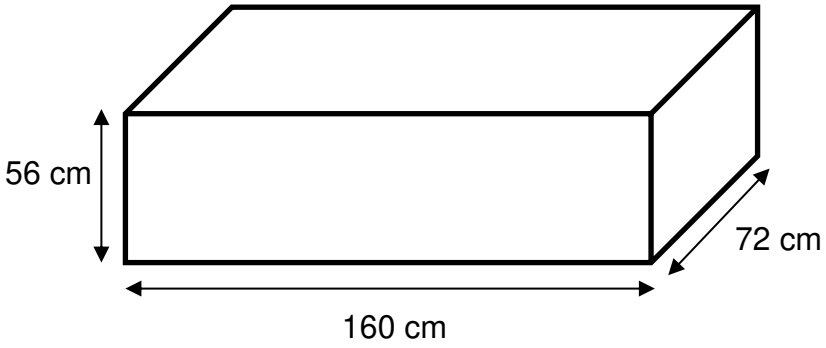
Where:
v = volume of cone
r = radius of cone
h = height of cone

Strawberry	**cm³**
Vanilla	**cm³**

[4]

Questions continue on the following page

12. Jamie needs to cover this cuboid chest in multi-coloured stickers for an art project:



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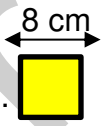


The stickers are in the shape of a square with a side length of 8 cm.

To work out how many stickers are needed, Jamie uses this formula:

$$\textit{Total number of stickers} = \frac{\textit{Total surface area of chest}}{\textit{Area of one sticker}}$$

How many stickers does Jamie need?

Answer	

[4]

13. Drew is a gardener.

This table shows how much other local gardeners charge per hour:

Amount (A) charged per hour (£)	Number of gardeners
20 < A ≤ 30	2
30 < A ≤ 40	6
40 < A ≤ 50	8
50 < A ≤ 60	4
Total	20

Drew wants to charge an hourly rate equal to the estimated mean amount per hour.

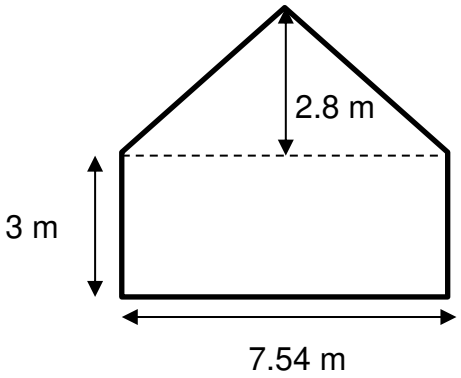
How much should Drew charge per hour?

Answer	**£**

[4]

Questions continue on the following page

14. Ashley wants to paint the wall shown:



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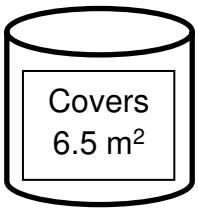
Ashley finds this tin of paint online:



How many tins of paint will Ashley need to buy to paint the wall?

Show your working.

Answer	**tins**

[5]

15. Quinn wants to buy some rope lights to put around a 164 foot section of a garden.

Quinn finds these rope lights online:

Rope light	A	B	C	D	E
Price per metre	£0.60	£1.99	£1.89	£0.75	£0.50

Quinn wants to buy rope lights that are 8% longer than the section of the garden.

Quinn buys the rope lights with the median price.

How much will Quinn pay in total?

Use 1 foot = 0.305 metres

Answer	£

[6]

This is the end of the assessment.