

TQUK Functional Skills Qualification in Maths at Level 2

Examination Past Paper 9

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 $0.082 + 0.49$

Answer	

[1]

2. Work out $8.246 \div 4$

Answer	

[1]

Questions continue on the following page

3. Work out $4^2 - 10 \times 2$

	Answer

[2]

4. Use rounding to check the calculation below:

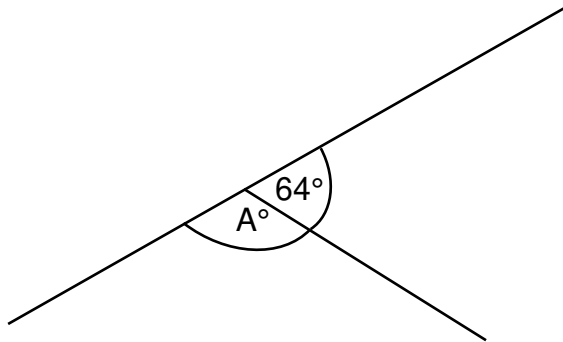
$$7.1423 \times 6.8967 = 49.25830041$$

Show your working.

	Answer

[2]

5. Casey thinks angle A is less than 120° :



Not drawn to scale

Is Casey correct?

Show how you decide.

Answer	

[2]

6. Work out:
 $738\,925 - 245\,128 - 18\,503$

Answer	

[2]

Questions continue on the following page

7. On a map, the distance between Mira's house and the cinema is 7 centimetres (cm).

The scale on the map is 1 : 50 000

Work out the actual distance between Mira's house and the cinema.

Give your answer in kilometres (km).

Answer km

[2]

8. The table shows the number of students on a course at college:

	First-year students	Second-year students
Attend online classes only	10	13
Attend classes on campus only	15	12

One person is chosen at random.

What is the probability that this person is a second-year student who attends classes on campus only?

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

Answer a) Decimal: b) Percentage:
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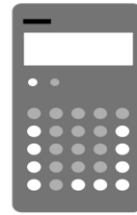
[3]

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 12 540 000 in words.

Answer	
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[1]

2. Round 823.95132 to one decimal place.

Answer	
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[1]

3. Bo asks a company to build a wall in 18 days.
The company's builders all work at the same speed.
It will take 5 builders 12 days to build the wall.
Can 3 builders build the wall in 18 days?
Show how you decide.

Answer	

[2]

4. Write 0.472:
- a) as a fraction
- b) as a percentage.

Answer	a) Fraction:	b) Percentage:

[2]

5. Put these fractions in order starting with the lowest:

$\frac{4}{5}$

$\frac{8}{5}$

$\frac{13}{15}$

$\frac{15}{10}$

Show any working here:

Answer				
	Lowest			

[2]

Questions continue on the following page

6. Kai looks online at the reviews of a hotel.

1088 reviewers would recommend the hotel.

192 reviewers would **not** recommend the hotel.

What percentage of the total reviewers would recommend the hotel.

Answer	%

[2]

7. Ashley buys a new freezer.

The instructions recommend that the freezer temperature is set at below 0 degrees Fahrenheit (°F).

Ashley sets the temperature to –15 degrees Celsius (°C).

Has Ashley set the freezer to the correct temperature?

Show how you decide.

Use:

$$C = \frac{5(F - 32)}{9}$$

Where:

C = temperature in degrees Celsius

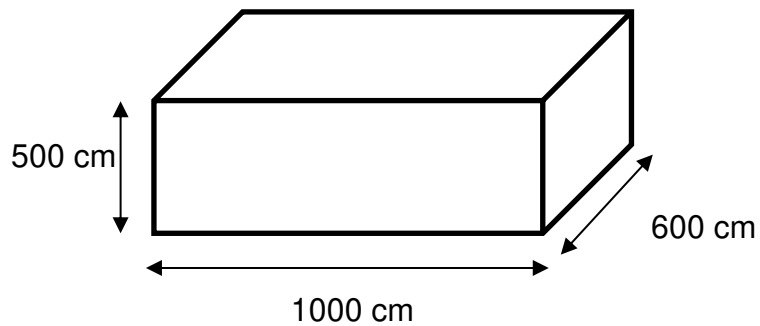
F = temperature in degrees Fahrenheit

Answer	

[3]

Questions continue on the following page

8. Charlie needs to paint the outside of this cuboid:



Not drawn to scale

Charlie thinks the total area to be painted is more than 2 750 500 square centimetres (cm^2).

Is Charlie correct?

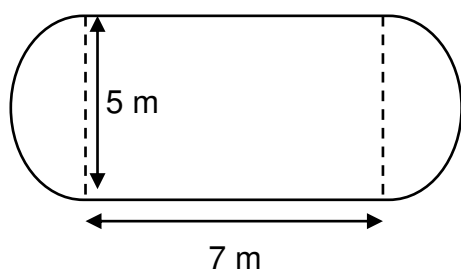
Show how you decide.

Area for working out the answer.

Answer

[3]

9. Stevie needs to put a rope around the pond shown below.
The pond is in the shape of a rectangle with a semi-circle at each end.



Not drawn to scale

Stevie thinks 55 metres (m) of rope will be needed in total.

Is Stevie correct?

Show how you decide.

Use $\pi = 3.14$

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Answer	
---------------	--

[3]

Questions continue on the following page

10. Robin needs to make a pipe out of liquid copper.

Robin knows:

- density of copper = 8.96 g/cm^3
- the pipes need to have mass = 4480 grams.

What volume of liquid copper does Robin need to use?

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

Past paper	
Answer	cm³

[3]

11. Morgan checks how much driving instructors charge for driving lessons:

Amount (A) charged per hour (£)	Number of driving instructors
$20 < A \leq 30$	2
$30 < A \leq 40$	9
$40 < A \leq 50$	3
$50 < A \leq 60$	1
Total	15

Morgan estimates the mean amount per hour.

Morgan will not pay any more than the mean amount.

What is the maximum amount per hour that Morgan will pay?

Past paper

Answer £

[4]

Questions continue on the following page

12. Taylor is planning a road trip.

The total distance is 1860 miles.

The average speed limit is 30 miles per hour.

Taylor wants to drive for a maximum of 6 hours per day.

How many whole days will Taylor need to complete the **entire** road trip driving at the average speed limit?

--

Answer

days

[4]

- 13.** Izumi sells chocolate muffins and jam doughnuts.

This table shows the number of chocolate muffins sold over the last 6 days:

Chocolate muffins					
43	30	24	32	28	35

This table shows the number of jam doughnuts sold over the last 6 days:

Jam doughnuts	
Mean number sold per day	28
Range	25

Izumi claims:

- i) 'on average I sell more chocolate muffins each day'
- ii) 'the sales of the chocolate muffins are more consistent.'

Are both of Izumi's claims correct?

Give a reason for each of your answers.

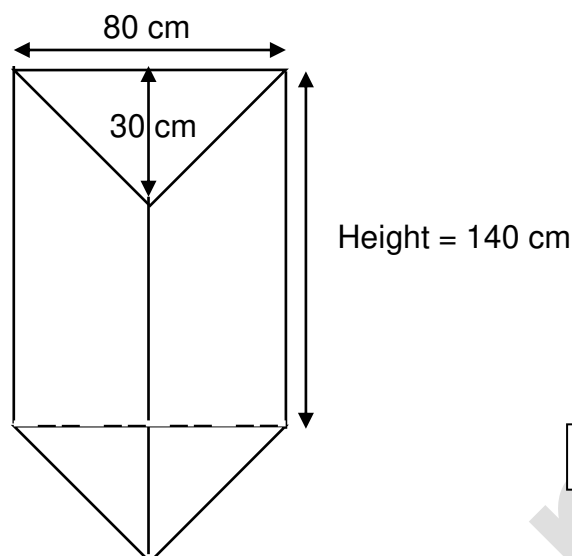
Show your working.

Reason - claim i)
Reason - claim ii)

[4]

Questions continue on the following page

14. Hayden needs to fill this fish tank with water.
The top of the tank is in the shape of a triangle.



Not drawn to scale

To work out how much water the tank holds, Hayden uses this formula:

Volume of tank in cubic centimetres = area of top of tank $\times$ height of tank

Hayden has a bucket that will hold 11 litres (l) of water.

What is the minimum number of times Hayden will need to use the bucket to fill the tank?

Answer box is on the following page

[5]

17

15. Luca wants to put ivy along the top of a 40-foot-long garden fence.

Luca finds these prices:

Ivy	A	B	C	D	E
Price per metre	£2.50	£2.00	£1.50	£1.00	£2.75

They will buy 18% more ivy than needed.

Luca buys the ivy that has the median price.

How much will Luca pay in total?

Use 1 foot = 0.305 metres

Show your working.

Past paper	<table border="1"> <tr> <td style="width: 80px;">Answer</td> <td>£</td> </tr> </table>	Answer	£
Answer	£		

[6]

This is the end of the assessment.