TQUK Functional Skills Qualification in Maths at Level 2

Examination Past Paper 6

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 2.109 + 0.98

Answer	

[1]

2. Work out the difference between –4600 and 8000

Answer	

[1]

Questions continue on the following page

3. Round 7.5385 to one decimal place.

Use your rounded value to **estimate** the answer to 30 000 × 7.5385

Show your working.

Answer	

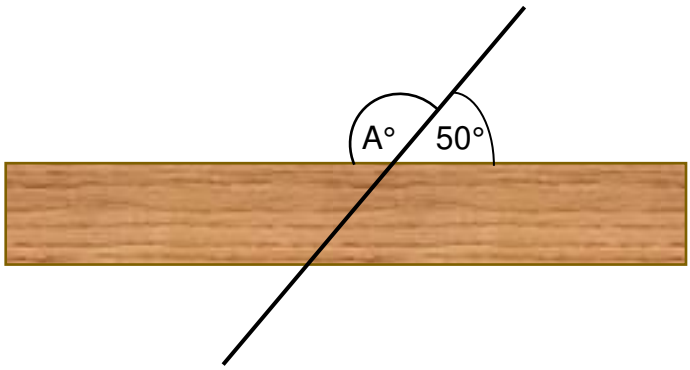
[2]

4. Work out 7^2 (40 ÷ 4)

Answer	

[2]

5. Ashley needs to cut a piece of wood as shown:



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Ashley thinks angle A will be 140°

Is Ashley correct?

Show how you decide.

Answer	

[2]

Questions continue on the following page

6. There are 300 sweets in a box.

There are:

- 52 chocolate sweets
- 150 strawberry sweets
- 98 lemon sweets.

One sweet is chosen at random.

What is the probability that the sweet chosen is a chocolate sweet?

Give your answer as a fraction in its simplest form.

Answer	

[2]

7. A steel block has:

- mass = 7850 grams (g)
- volume = 1000 cm^3

Work out the density of the concrete block.

Answer	

[2]

8. Enkai needs 2.5 litres (l) of water.

The jug Enkai uses measures in pints (pt).

Enkai measures out 4.5 pints of water.

Does Enkai have enough water?

Show how you decide.

Use 1 litre = 1.759 pints

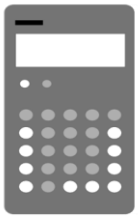
Answer	

[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.

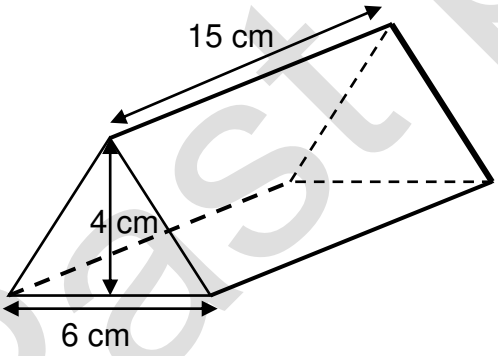
1. Write down the mode of these numbers:

8.375 8.400 8.000 8.750 8.500 8.375 8.725

Answer	

[1]

2. The diagram shows a triangular prism:



Not drawn to scale

Work out the area of the base of the prism.

Answer	**cm²**

[1]

Questions continue on the following page

3. Nilam wants to buy a new laptop.

Nilam finds these offers for the same laptop on different websites:

Website A	**Website B**
$\frac{3}{8}$ off	34% off

Which website gives the bigger discount?

Show how you decide.

Answer	

[2]

4. Use this formula to convert 15 degrees Celsius (°C) into degrees Fahrenheit (°F):

$$F = \frac{9C}{5} + 32$$

Answer	**°F**

[2]

5. Charu normally sells cakes for £4.00 each.

Charu raises the selling price of each cake to £12.00

Calculate the percentage change.

Answer	**%**

[2]

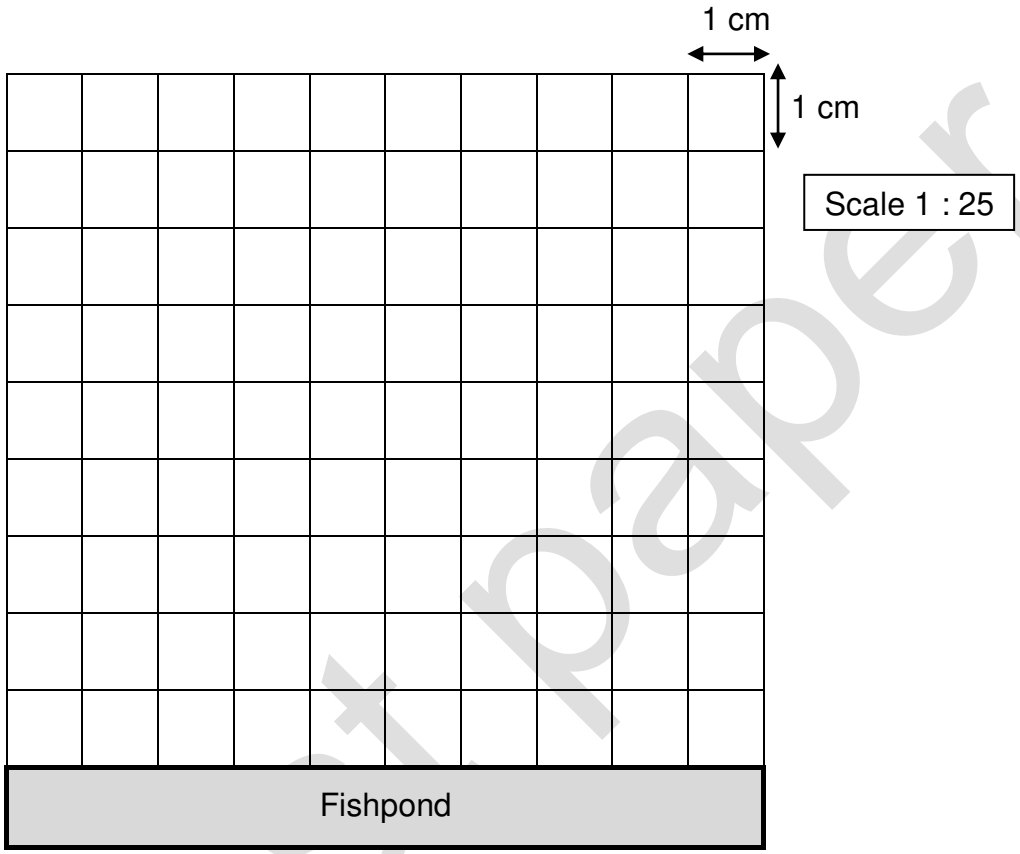
Questions continue on the following page

6. Sasa wants to put a picnic table in a garden.

The table needs to be:

- in the shape of a square with side length 0.5 metres (m)
- 1 metre away from the fishpond.

Draw a possible position for the table on the scale diagram below:



[2]

7. Frankie needs to order 400 cupcakes for a party.

Frankie needs to order lemon, strawberry and chocolate cupcakes in the ratio:

9 : 4 : 3

Frankie thinks there will be 100 more lemon cupcakes than strawberry cupcakes.

Is Frankie correct?

Show how you decide.

Answer	

[3]

Questions continue on the following page

8. Drew is a manager of a company and needs to set the budget for next year.

This year there was a budget of £980 000

Drew increases this budget by 4%.

Drew thinks the new budget will be less than £1 020 000

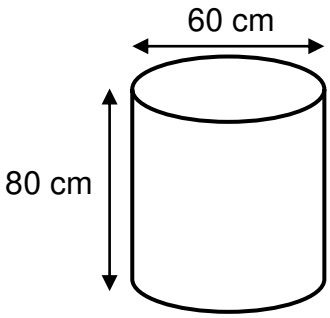
Is Drew correct?

Show how you decide.

Answer	

[3]

9. Dayo needs to paint the outside of this cylinder, including the top and the bottom:



Not drawn to scale

Dayo thinks the total area to be painted is less than 20 000 cm^2

Is Dayo correct?

Show how you decide.

Use $\pi = 3.14$

Answer	

[3]

Questions continue on the following page

10. On Monday, Arya got a new TV package.

On Tuesday, Kai got the same TV package but got a 28% discount.

Kai pays £21.60 per month after receiving the discount.

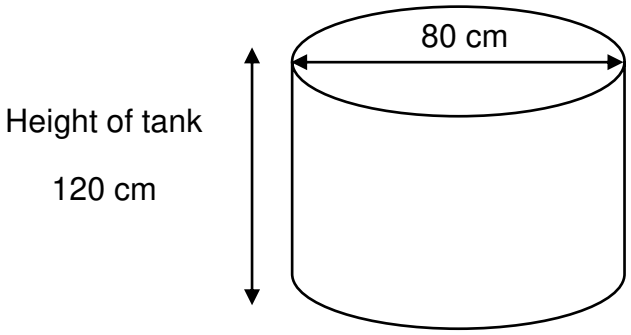
How much more does Arya pay for the package?

Answer	

[3]

11. Cam is setting up a new fish tank.

The fish tank is in the shape of a cylinder:



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Cam uses this formula to work out how many pounds (lbs) of gravel to add to the tank:

Amount of gravel in pounds (lbs) = volume of tank divided by 4546

How much gravel does Cam need to add to the tank?

Use $\pi = 3.14$

Answer	**lbs**

[4]

Questions continue on the following page

12. Quinn wants to buy a new computer for £3000

Quinn paid £1500 into a new savings account two years ago.

The savings account paid 2% compound interest per year.

Quinn uses all of the money that is now in the savings account as a deposit towards the computer.

The balance will be paid in equal monthly instalments of £119.95

How long will it take Quinn to pay for the computer?

Show your working.

Answer	

[4]

13. Jude grows sunflowers in two different fields.

These are the heights of each flower in Field A:

Field A					
134 cm	186 cm	120 cm	200 cm	118 cm	166 cm

This is a summary of the heights of each flower in Field B:

Field B	
Mean height	162 cm
Range	70 cm

Jude claims:

a) 'on average, sunflowers grew taller in Field A.'
b) 'the heights are more consistent in Field A.'

Are both of Jude's claims correct?

Give reasons for your answers.

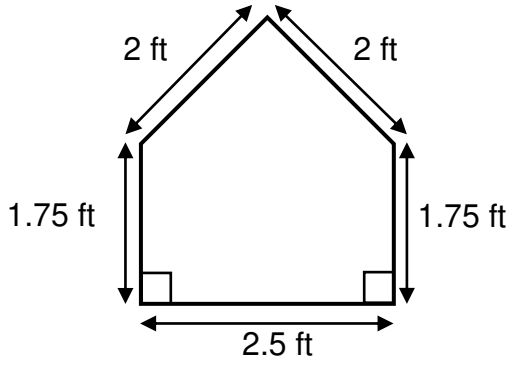
Show your working.

Reason - claim a)
Reason - claim b)

[4]

Questions continue on the following page

14. Zuri wants to put a wooden border around the flower bed shown:



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Zuri measured the dimensions of the garden in feet (ft).

The shop sells wood in metres (m).

Zuri will buy 12% more wood than needed to allow for mistakes.

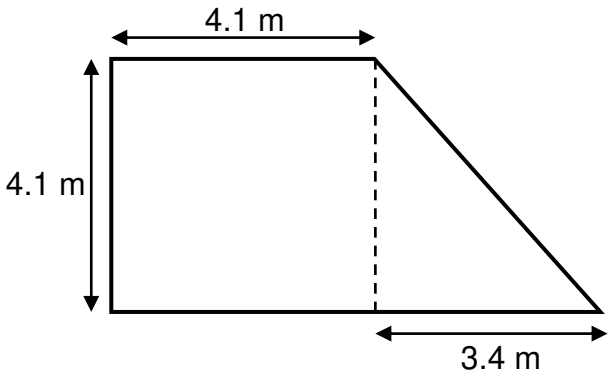
How many metres of wood does Zuri need to buy in total?

Use 1 foot = 0.305 metres

Answer	**m**

[5]

15. Jordan wants to tile this floor:



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Jordan finds these prices:

Price per square metre (m^2)						
£80.50	£75.99	£50.99	£60.50	£100.00	£45.75	£100.00

Jordan buys the tiles with the median price.

How much will Jordan pay in total?

Give your answer to the nearest pound (£).

Show your working.

Answer box is on the following page

Answer	**£**

[6]

This is the end of the assessment.