Minute Maths

Spring 2025

This answer book will only be marked and certificated if this is completed by the learner AND prison staff

Learner Statement of Authenticity

By returning this answer book you are confirming that the work contained is entirely your work and does not include any work completed by anyone other than yourself. You also confirm that you have completed the assignment/portfolio in accordance with the instructions given by your establishment.

Learner Prison No. in CAPITAL LETTERS

Prison:

Learner's Initials:

Date:

Establishment Confirmation of Authenticity

I confirm that the above-mentioned learner, to the best of my knowledge, is the sole author of this completed answer book.

Staff Name:

Signed:

Date:

STAFF USE ONLY			
Date Issued	Date Marked	Assessor Initials	Result
			☐ PASS ☐ REFER

Way2Learn

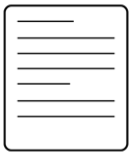
Contents

How it works

Welcome to your Way2Learn course.

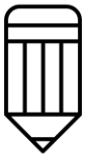
This course is designed to enable access to education for all – whether in-cell or in your establishment's education facility.

To complete this course, you will need to watch all of the episodes. Times for each episode are provided on the next page.



You can request a copy of the episode transcript from your Distance Learning Coordinator or Learning and Skills Manager if you need to revisit any of the information.

If you have any difficulties in completing this course, please speak to a suitable peer mentor or member of staff for some help.



Once completed, return your answer book to the appropriate member of staff. After it has been received, it can take up to 3 weeks to be assessed and issued a certificate.

You can ask a member of staff for a copy of our policies and practices for further details.

Episode Guide

Minute Maths

UWE Bristol

Friday & Sunday

Content Guide – Episodes 1-9. Part 1 of 2	Friday/ Sunday
Ep 1: Area - Calculating the area of regular and irregular shapes.	**9:00am 3:00pm**
Ep 2: Perimeter - Calculating the perimeter of regular and irregular shapes.	**9:05am 3:05pm**
Ep 3: Mean - What the mean average is and how to calculate it.	**9:07am 3:07pm**
Ep 4: Median - How to find the median of a set of numbers.	**9:10am 3:10pm**
Ep 5: Mode - The meaning of the mode and how to find it.	**9:13am 3:13pm**
Ep 6: Range - How to calculate the range of a group of numbers.	**9:16am 3:16pm**
Ep 7: Volume - How to calculate the volume of 3D shapes.	**9:19am 3:19pm**
Ep 8: Fractions - Working out fractions of money.	**9:22am 3:22pm**
Ep 9: More Fractions - Continues with showing how to calculate fractions.	**9:25am 3:25pm**

Friday & Sunday

Content Guide – Episodes 10-15. Part 2 of 2	Friday/ Sunday
Ep 10: Percentages - How to multiply a number by a percentage.	**1:05am 7:05pm**
Ep 11: More Percentages - Expressing an amount in a percentage of a number.	**1:11am 7:11pm**
Ep 12: Area of a Triangle - How to calculate the area of a triangle.	**1:14am 7:14pm**
Ep 13-15: More Maths! Our last three episodes allow you to take your Maths to a higher level. No answer book is required, just additional mental maths.	**1:18am 7:22pm**

Learning Outcomes

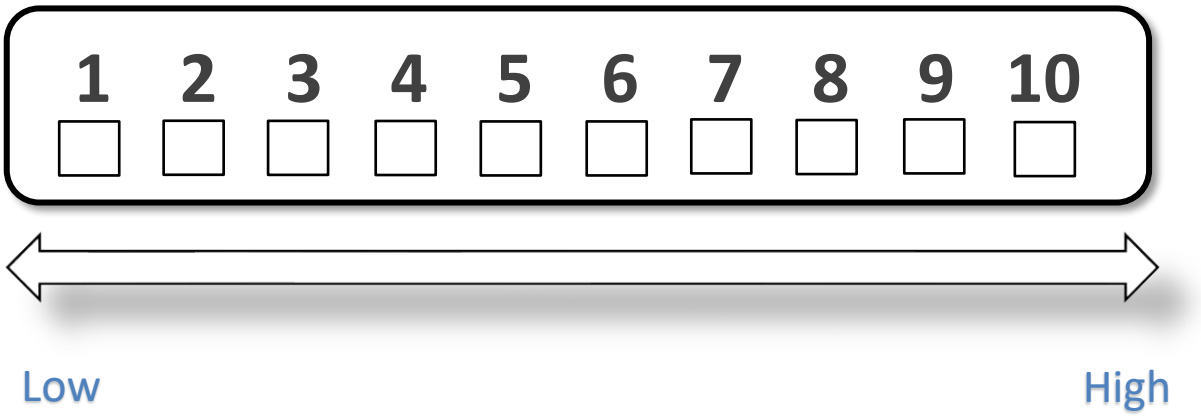
1. Learn how to measure area and perimeter for different shapes, improving measurement skills.
2. Understand mean, mode, median, and range to better analyse data sets.
3. Use knowledge of volume and percentages to tackle everyday maths problems.
4. Calculate the area of triangles using simple formulas, enhancing understanding of shapes.

Starting Out

Consider the learning outcomes above.

On a scale of 1 -10, how would you rate your knowledge of Maths before starting this course?

(Please tick the appropriate box)



At the end of this course, you will have the opportunity to rate your knowledge once more.

Knowledge Check

To pass this course you will need to correctly answer **80%** of the questions.

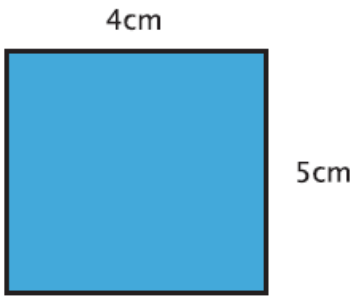
This equates to **56** correct answers out of the 71 marks available.

Show your working out where relevant in the spaces provided.

Episode 1: Area

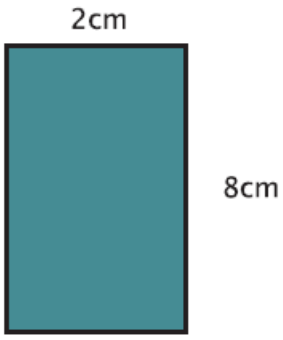
What is the area of the shapes below?

1. Shape A



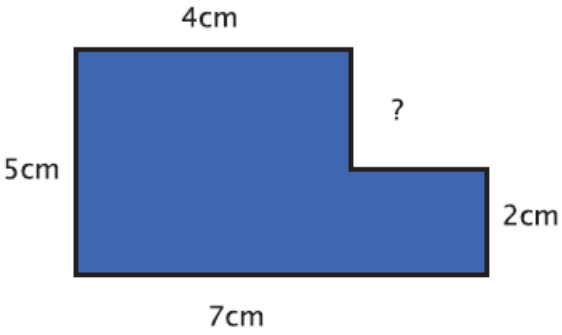
Area of shape A = ...

2. Shape B



Area of shape B = ...

3. Shape C



Area of shape C = ...

Space for working out

4. You are laying turf for your neighbour. It is a rectangular garden. The longest side is 24 metres, and the shortest side is 11 metres. Calculate how many square metres of turf you will need.

Space for working out

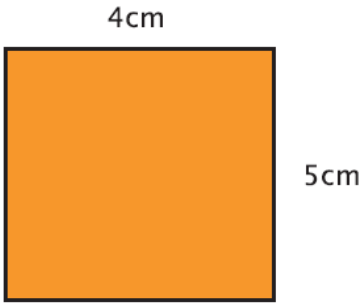
Answer: .....

Episode 2: Perimeter

What is the perimeter of the shapes that follow?

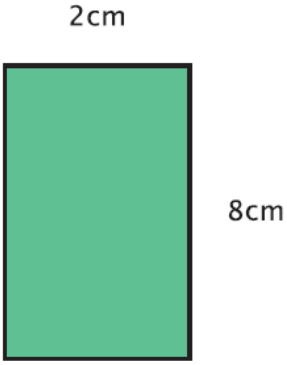
Note: For some, you may need to calculate the missing values first.

1. Shape A



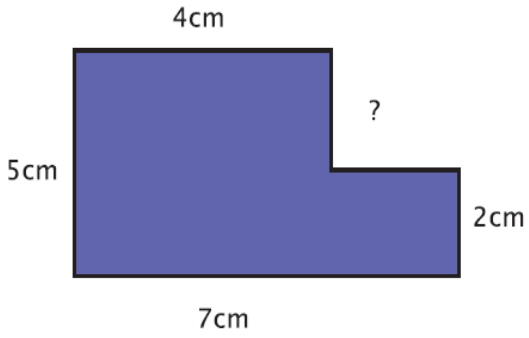
Perimeter of shape A = ...

2. Shape B



Perimeter of shape B = ...

3. Shape C



Perimeter of shape C =.....

Space for working out

4. You need to put a fence up for your neighbour's garden. It is a rectangular garden. The longest side is 18 metres, and the shortest side is 10 metres. How many metres is the perimeter of the garden?

Space for working out

Answer: .....

Episode 3: Mean

Find the mean of these sets of numbers.

Remember, to find the mean you need to add all the numbers together and divide by the number of bits of data you have.

1. 6, 3, 1, 4, 6, 9, 6 **Mean =** .....

2. 7.3, 5.7, 9.5, 5.8, 9.5 **Mean =** .....

Space for working out

3. Consider a cricket batsman whose scores in eight innings were:

50, 60, 40, 55, 45, 65, 35, 50

What is the mean score for the batsman?

Space for working out

Answer: .....

Episode 4: Median

Find the median of these sets of numbers.

Remember, to find the median you need to place the numbers in order from smallest to largest and then find the number that is in the middle.

1. 6, 3, 1, 4, 6, 9, 6 **Median =** .....

2. 7.3, 5.7, 9.5, 5.8, 9.5 **Median =** .....

Space for working out

3. Consider a basketball player whose points scored over nine games were:

24, 16, 32, 28, 21, 30, 19, 27, 25

What is the median score for this player?

Space for working out

Answer:.....

Episode 5: Mode

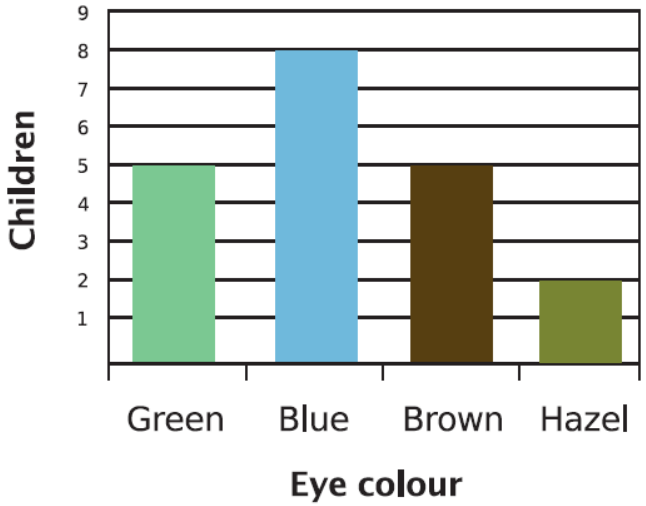
Remember, the most common value is the mode. If, for example, car colours are being compared and this information is collected:

White 12; Black 14; Red 12; Blue 9; Green 11

*Then the mode is **black** because more black cars were owned than any other colour.*

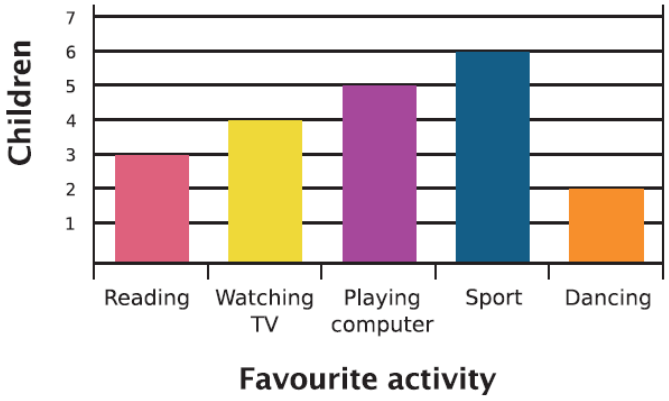
What is the mode in each of these examples?

. **1. A chart showing the number of children with each eye colour**



Mode = ……

2. A chart showing children's favourite weekend activities



Mode = ……

Space for working out

3. These are the scores for a darts player at the end of a match:

65, 89, 70, 42, 65, 98, 49, 27, 45

What is the mode score for the player?

Space for working out

Answer: ……

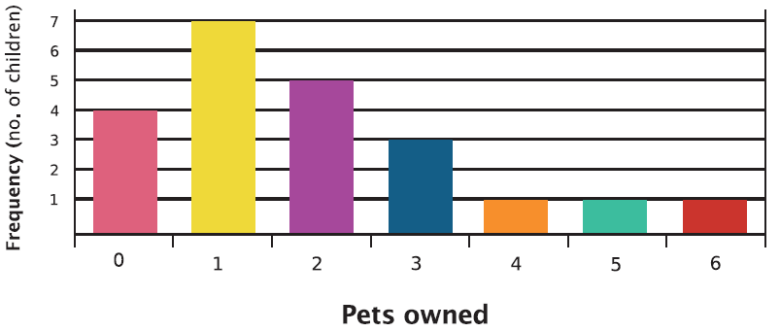
Episode 6: Range

*Remember, the range is the **difference** between the highest and lowest values of the thing being measured.*

For example, if the greatest number of times a week a child reads to a parent is 7 and the least is 1, the range is 6 (7 – 1) (Highest – lowest)

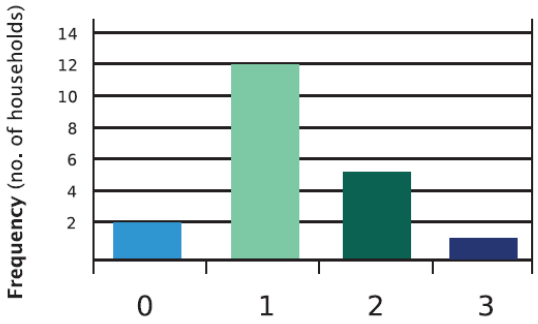
Now find the range in these sets of data:

1. **A chart showing the number of pets owned by a school class**



Range = ……

2. A chart showing the number of cars owned in a household



Range = ...

Space for working out

3. In a hardware store, the sale prices (in £) of various power tools are recorded as follows:

55, 78, 63, 42, 55, 90, 48, 30, 65

Calculate the range of these sale prices.

Space for working out

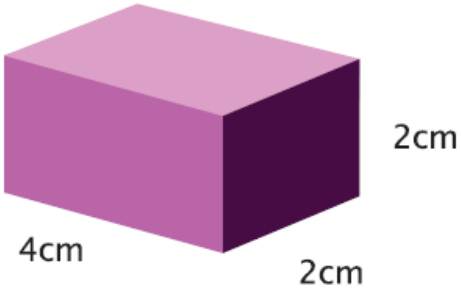
Answer:.....

Episode 7: Volume

Remember, to calculate the volume of a 3D shape, you need to multiply the three measurements (width, length, and height) together.

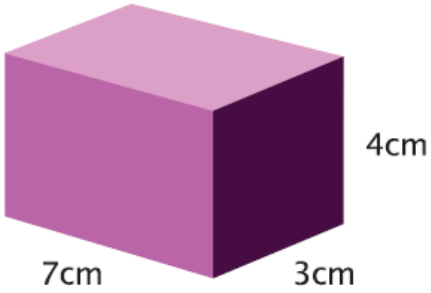
Calculate the volume of these boxes:

1.



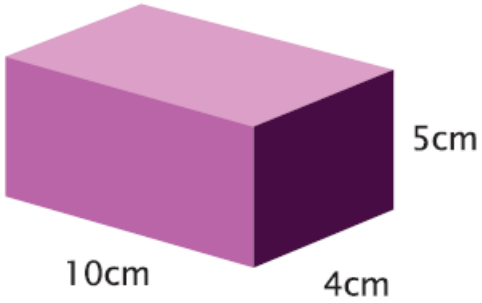
Volume of shape A = ...

2.



Volume of shape B = ...

3.



Volume of shape C = ...

Space for working out

4. You want to fill a swimming pool with water. Your pool is 4 metres wide, 8 metres long and 2 metres deep. How much water will you need?

Space for working out

Answer: .....

Episode 8: Fractions and Money (1)

Find these fractions by dividing by the denominator (the bottom number of the fraction):

1. What is 1/3 of £21? **Answer =** .....

2. What is 1/3 of £39? **Answer =** .....

3. What is 1/4 of £48? **Answer =** .....

4. What is 1/10 of £50? **Answer =** .....

5. What is 1/2 of £40? **Answer =** .....

6. What is 1/2 of £3? **Answer =** .....

7. What is 1/10 of £2? **Answer =** .....

Space for working out

8. Your food bill at a restaurant comes to £32. There are 4 people in your party. How much should each person pay?

Space for working out

Answer: .....

Episode 9: Fractions of Money (2)

Find these fractions by dividing by the denominator (the bottom number of the fraction) and then multiplying by the numerator (the top number):

1. What is 2/3 of £18? **Answer =** .....

2. What is 2/3 of £33? **Answer =** .....

3. What is 3/4 of £42? **Answer =** .....

4. What is 2/4 of £42? **Answer =** .....

5. What is 3/4 of £16? **Answer =** .....

6. What is 3/10 of £70? **Answer =** .....

7. What is 4/10 of £1? **Answer =** .....

8. What is 3/5 of £50? **Answer =** .....

Space for working out

9. You are going to the cinema. You need to phone a taxi ¾ of an hour before the film is due to start. How many minutes is this?

Space for working out

Answer: .....

Episode 10: Percentages (1)

Find these percentages by dividing the number by 100, then multiplying by the percentage or by using any other methods you know:

1.	25% of 40	**Answer =** .....
2.	40% of 100	**Answer =** .....
3.	10% of 20	**Answer =** .....
4.	75% of 36	**Answer =** .....

5.	12% of 100	**Answer =** ……
6.	90% of 85	**Answer =** ……

Space for working out

7. A car repair service is running a special promotion that offers 35% off the standard price for an oil change service. If the usual price for an oil change is £275, what is the discounted price?

Space for working out

Answer: ……

Episode 11: Percentage (2)

Example: *Express 15 as a percentage of 60:*

$$\frac{15}{60} \times 100 = \qquad 15 \div 60 \times 100 = \qquad \textbf{25\%}$$

Find the percentage:

(Where necessary **round to one decimal place**).

1. 15 as a percentage of 120 = …… 200 as a percentage of 2000 = ……

80 as a percentage of 200 = …… 74 as a percentage of 200 = ……

112 as a percentage of 160 = …… 36 as a percentage of 50 = ……

216 as a percentage of 360 = …… 189 as a percentage of 420 = ……

2. In a school of **400 pupils, 220 are boys**. What percentage are girls?

Answer: ……..

3. In September it rained for **15 days**. What percentage of the month did it rain?

Answer: ……..

4. The captain of a football team scored **17 of the 85** goals they scored that season.

What percentage of their goals did he score?

Answer: ……..

5. Alex has **3 dolls; 12 teddy bears** and **5 soft rabbits.**

What percentage of her toys are:

a) teddy bears **Answer:** ……

b) dolls **Answer:** ……

Space for working out

6. **A taxi company looks at how often their drivers are late. In one week, a driver has 48 fares but is late for 4 of them. Calculate how many times he has been late as a percentage.**

(Give your answer to **two decimal** points)

Space for working out

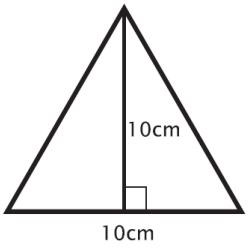
Answer: .....

Episode 12: Area of a Triangle

Remember, that the area of a triangle is ½ base x height.

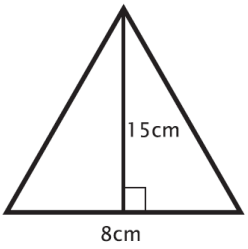
Calculate the area of these triangles:

1.



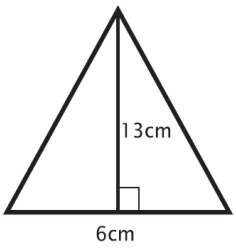
Area of triangle 1 = ...

2.



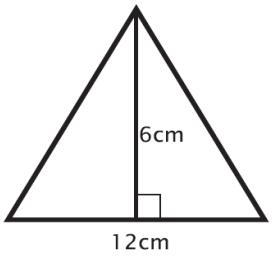
Area of triangle 2 = ...

3.



Area of triangle 3 = ...

4.



Area of triangle 4 = ...

Space for working out

5. You have been asked to put some flags up for a school fete. The flags are triangular. Their base is 2 metres long and they have a height of 3 metres. What is the area of each flag?

Space for working out

Answer: .....

Episodes 13 - 15

Episodes 13-15 do not form part of the assessment for Minute Maths. They do, however, provide you with an opportunity to explore more advanced areas of Maths including Cubing a number, calculating the area of a circle, and ratios.

Workplace Scenarios

Question 1 (Area and Perimeter)

Scenario: You are working as a site supervisor on a construction project. Your team is laying concrete slabs for a new warehouse floor. The floor space is a rectangle measuring 20 metres by 12 metres. The client has asked you to also install a safety railing around the perimeter of the floor.

a) Calculate the total area of the floor that needs to be covered in concrete.

b) Calculate the total length of the safety railing needed around the perimeter.

a) Area to be covered in concrete = ……

b) Length of perimeter = ……

Question 2 (Percentages and Discounts)

Scenario: You are working as a retail manager and need to apply a sale discount to some products. A new promotion offers 25% off all electronic items. A customer is interested in purchasing a laptop priced at £480 and a tablet priced at £320.

a) Calculate how much the customer will save on each item.

b) Calculate the total amount the customer will need to pay after the discount is applied.

a) Total savings of both items = ……

b) Total cost after discount = ……

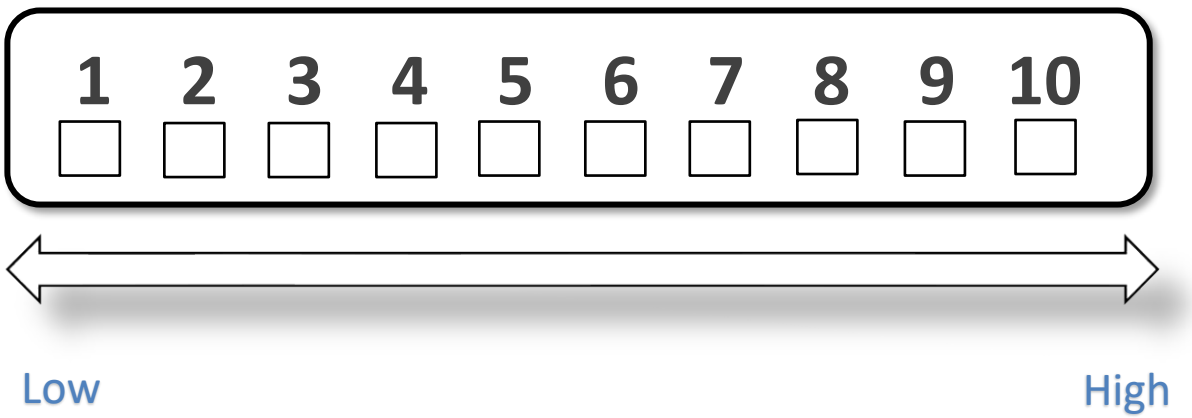
Learning Evaluation

You must comment on the three most important things you have learnt and complete distance travelled.
1..... .... 2..... .... 3..... ....

Distance Travelled

Now that you have completed this course, on a scale of 1 -10, how would you rate your knowledge of Maths?

(Please tick the appropriate box)



End of Knowledge Check

This page has been left blank

Course Feedback – Minute Maths

TO QUALIFY FOR A MUG OR WATER BOTTLE YOU MUST COMPLETE IN FULL, THE LEARNING EVALUATION. THIS IS A VOLUNTARY SUBMISSION. IF YOU DO NOT COMPLETE THIS YOUR WORKBOOK WILL STILL BE MARKED AND CERTIFICATED, BUT YOU WILL NOT BE ELIGIBLE FOR ANY OF OUR INCENTIVISED GIFTS.

Please clearly write your full name here:

We value your feedback. Please rate each aspect on the scale below:

1. **The quality, style and tone of the videos.**

1	2	3	4	5	6	7	8	9	10

Low **High**

2. **The clarity of the answer book.**

1	2	3	4	5	6	7	8	9	10

Low **High**

3. **Your enjoyment of this course.**

1	2	3	4	5	6	7	8	9	10

Low **High**

Please tell us what you enjoyed most about this course

Please give us one suggestion to improve this course