

## Week 6

### This week in a nutshell:

Here, we see the skills from the previous five weeks being put to slightly more abstract uses, all of which consolidate and extend the fluency of your students' understanding of these topics.

**Question 1:** Using units

**Question 2:** Checking calculations

**Question 3:** Geometric sequences

**Question 4:** Non-standard real life graphs

**Question 5:** Maps and scales

The questions on units may require discussion, as will the work on real life graphs. The questions on checking calculations rely on place value understanding, which should come from the work on standard form. The questions on map scales are reliant on understanding ratio.

### This week's ideas for class discussion include:

Question 1: **Using units**

- Why is use of an appropriate unit important? Do you think this matters?

Question 2: **Checking calculations**

- Why might we use a previously known result to perform a new calculation?

Question 3: **Geometric sequences**

- Why do you think the word "geometric" is used to describe a sequence with a common ratio?

Question 4: **Non-standard real life graphs**

- If "a picture paints a thousand words", what can be said about a mathematical diagram?

Question 5: **Maps and scales**

- How do you remember the compass directions?
- Are map skills still important given the development of GPS technology?

## Week 6: Day 1

1) What is a sensible unit of measure for the height of a house?

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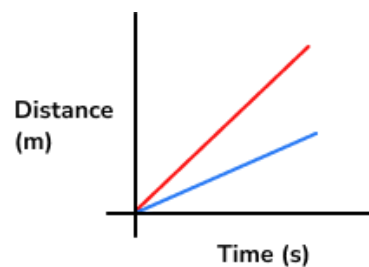
2) Given  $14 \times 316 = 4424$ . What is  $1.4 \times 3.16$ ?

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3) Continue the sequence: 3, 6, 12, \_\_, \_\_

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4) Which has greater speed, red or blue? How do you know?



5) Label this 8 point compass.



## Week 6: Day 1 Answers

- 1) What is a sensible unit of measure for the height of a house?

Metres

- 2) Given  $14 \times 316 = 4424$ . What is  $1.4 \times 3.16$ ?

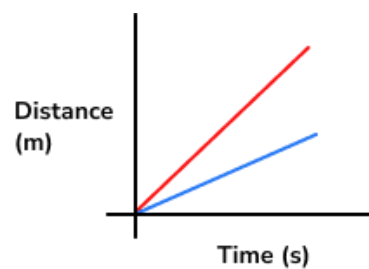
= 4.424

- 3) Continue the sequence: 3, 6, 12, \_\_, \_\_

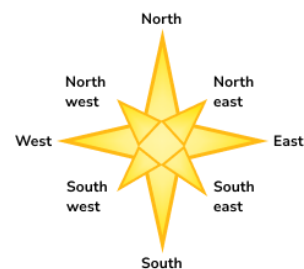
3, 6, 12, 24, 48

- 4) Which has greater speed, red or blue? How do you know?

Red, steeper line (greater distance in same time).



- 4) Label this 8 point compass.



## Week 6: Day 2

1) What is a sensible unit of measure for the weight of an apple?

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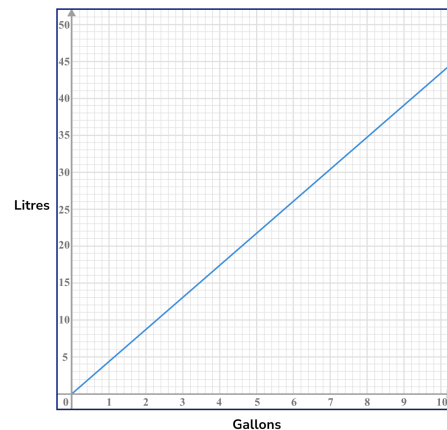
2) Given  $5.02 \times 1.17 = 5.8734$ . What is  $50.2 \times 117$ ?

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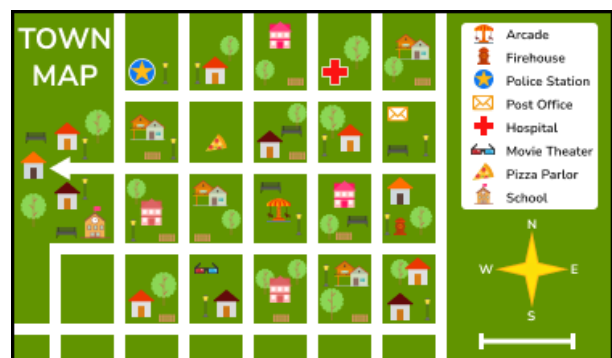
3) Continue the sequence: 1, 3, 9, 27, \_\_, \_\_

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4) Approximately how many litres is 5 gallons?



5) Which direction is the hospital from the police station?



## Week 6: Day 2 Answers

- 1) What is a sensible unit of measure for the weight of an apple?

Grams

- 2) Given  $5.02 \times 1.17 = 5.8734$ . What is  $50.2 \times 117$ ?

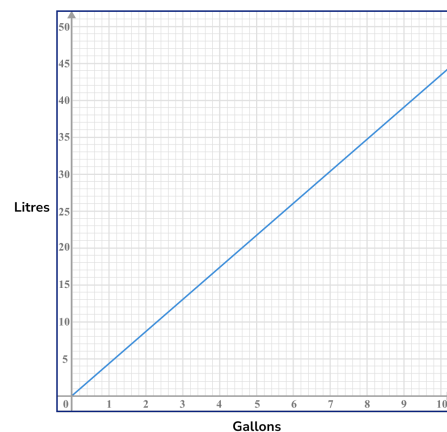
= 5873.4

- 3) Continue the sequence: 1, 3, 9, 27, \_\_, \_\_

1, 3, 9, 27, 81, 243

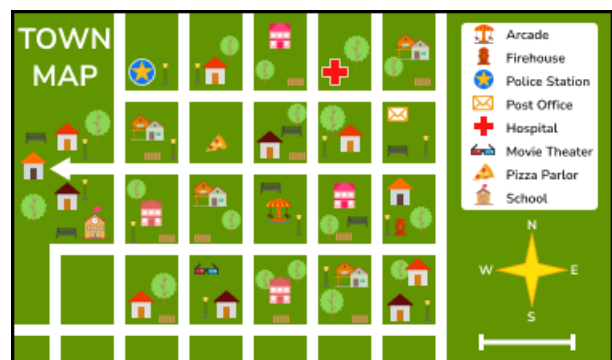
- 4) Approximately how many litres is 5 gallons?

= 22-23 litres



- 5) Which direction is the hospital from the police station?

East



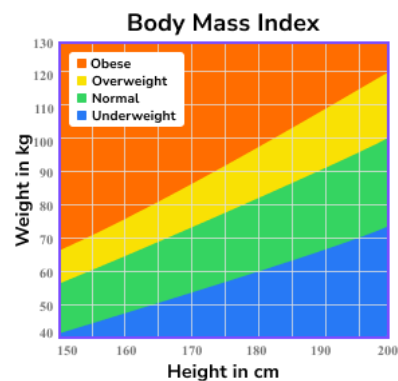
## Week 6: Day 3

1) What is a sensible unit of measure for the amount of liquid in a drinks bottle?

2) Given  $63 \div 8 = 7.875$ . What is  $6.3 \div 0.8$ ?

3) Fill in the gaps in this sequence: 64, 32, 16, 8, \_\_\_\_, \_\_\_\_

4) What category is someone that is 185cm tall and 72kg in weight?



5) Complete the table:

Distance on map	Scale	Real life distance (m)
10cm	1:1000	___m
5cm	1:20000	___m

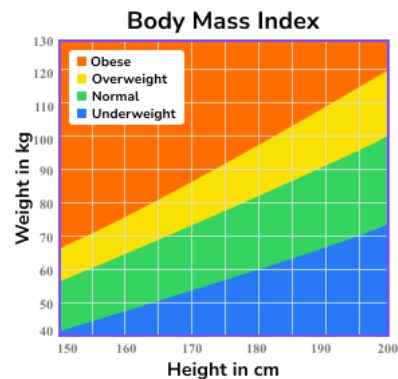
## Week 6: Day 3 Answers

1) What is a sensible unit of measure for the amount of liquid in a drinks bottle? **ml**

2) Given  $63 \div 8 = 7.875$ . What is  $6.3 \div 0.8$ ?  
**= 7.875**

3) Fill in the gaps in this sequence: 64, 32, 16, 8, \_\_\_\_, \_\_\_\_,  
64, 32, 16, 8, **4, 2**

4) What category is someone that is 185cm tall and 72kg in weight? **Normal**



5) Complete the table:

Distance on map	Scale	Real life distance (m)
10cm	1:1000	<b>100m</b>
5cm	1:20000	<b>1000m</b>

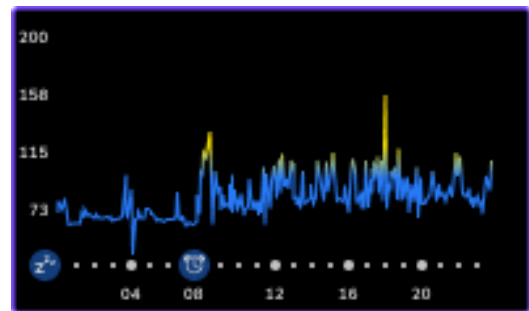
## Week 6: Day 4

1) What is a sensible unit of measure for the width of a postage stamp?

2) Given  $19 \times 253 = 4807$ . What is  $48.07 \div 1.9$ ?

3) Fill in the gaps in this sequence: 20, 10, \_\_, 2.5, \_\_

4) At what time of day was this person's heart rate at its highest?



5) Complete the table:

Distance on map	Scale	Real life distance (m)
___cm	1:100	35m
___cm	1:5000	250m



## Week 6: Day 4 Answers

- 1) What is a sensible unit of measure for the width of a postage stamp?

mm

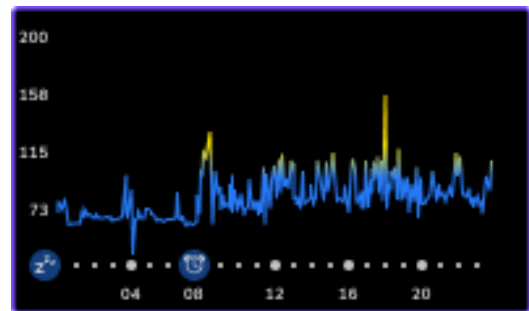
- 2) Given  $19 \times 253 = 4807$ . What is  $48.07 \div 1.9$ ?

= 25.3

- 3) Fill in the gaps in this sequence: 20, 10, \_\_, 2.5, \_\_

20, 10, 5, 2.5, 1.25

- 4) At what time of day was this person's heart rate at its highest? 1800



- 5) Complete the table:

Distance on map	Scale	Real life distance (m)
35cm	1:100	35m
5cm	1:5000	250m

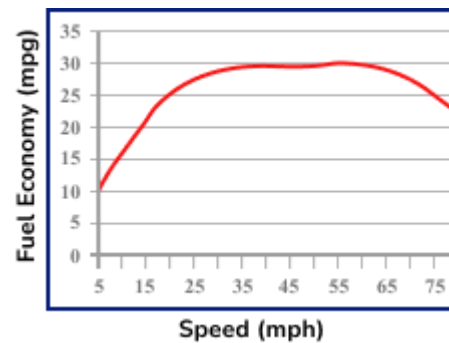
## Week 6: Day 5

1) What is a sensible unit of measure for the speed limit on a motorway?

2) Given  $83 \div 16 = 5.1875$ . What is  $51.875 \times 160$ ?

3) Fill in the gaps in this sequence: 1, -2, 4, -8, \_\_, \_\_

4) At what speed does this car have its best fuel economy?



5) Complete the table:

Distance on map	Scale	Real life distance
___cm	1:10000	1.5km
___cm	1:50000	12km

## Week 6: Day 5 Answers

- 1) What is a sensible unit of measure for the speed limit on a motorway?

km/h or mph

- 2) Given  $83 \div 16 = 5.1875$ . What is  $51.875 \times 160$ ?

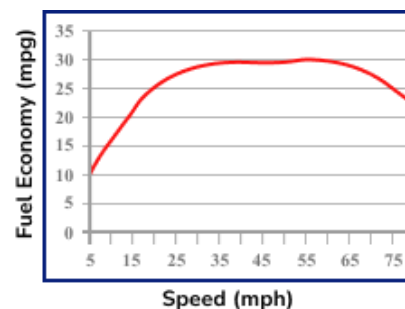
= 8300

- 3) Fill in the gaps in this sequence: 1, -2, 4, -8, \_\_, \_\_

1, -2, 4, -8, 16, -32

- 4) At what speed does this car have its best fuel economy?

55mph



- 5) Complete the table:

Distance on map	Scale	Real life distance
15cm	1:10000	1.5km
24cm	1:50000	12km

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