Question 1

Order the following times for 100m sprints

Core

10s, 9s, 12s, 13s, 11s, 12s, 14s, 10s

Challenge

10.5s, 9.7s, 10.3s, 9.8s, 11.1s, 10.6s, 10.8s, 10.1s

Super Challenge

10.51s, 9.86s, 10.05s, 11.55s, 11.1s, 10.65s, 10.15s, 10.56s

s means seconds

Question 2

Order the follow distances from the shot put

Core

16m, 15m, 21m, 18m, 20m, 23m, 17m, 18m, 19m, 18m

Challenge

16.5m, 15.6m, 17.8m, 16.6m, 17.2m, 18.6m, 18.2m, 18m, 17.8m

Super Challenge

15.65m, 16.56m, 17.55m, 16.25m, 16.5m, 15.62m, 16.86m, 18.66m, 17.68m

m means metres

Question 3

Scoring for sports day is as follows:

1st = 8 points, 2nd = 7 points, 3rd = 6 points, ... , 8th = 1 point

Calculate the total points score for the below.

Core

Position	1st	2nd	3rd	4th	5th	6th	7th	8th
Frequency	2	3	1	2	3	4	2	5

Challenge

Position	1st	2nd	3rd	4th	5th	6th	7th	8th
Frequency	12	24	26	14	15	9	14	29

Super Challenge

Position	1st	2nd	3rd	4th	5th	6th	7th	8th
Frequency	102	67	98	47	55	38	71	60

Question 4

The Olympic Track is 400m in length.

How many laps will it take to run:

Core

800 metres and the 400 metres

Challenge

1500 metres, 800 metres, 200 metres and 100 metres

Super Challenge

4000 metres, 1500 metres, 2 x 800 metres and the 200 metres

Question 5

Speed is measured as a distance divided by time.

Work out the following speeds in metres per second.

Core

Running 200m in 20 seconds

Challenge

Running 100 metres in 9.58 seconds (Usain Bolt's World Record)

Super Challenge

Running 5000 metres in 12 minutes 53 seconds (Mo Farah's fastest time)

Question 6

Work out:

Core

The difference between your height and how high you can jump (Sergeant/Vertical Jump World Record is 117cm)

Challenge

The average Jump height of your team

Super Challenge

Is there a connection between the group's height and how high they can jump.

Question 7

Using the following 200 metre times:

23s	24s	31s	26s	24s	23s	22s	21s
35s	23s	27s	22s	25s	26s	21s	20s

Core

Calculate the mode and range

Challenge

Calculate the median

Super Challenge

Calculate the mean

s means seconds

Question 8

Calculate how long it would take someone to:

Core

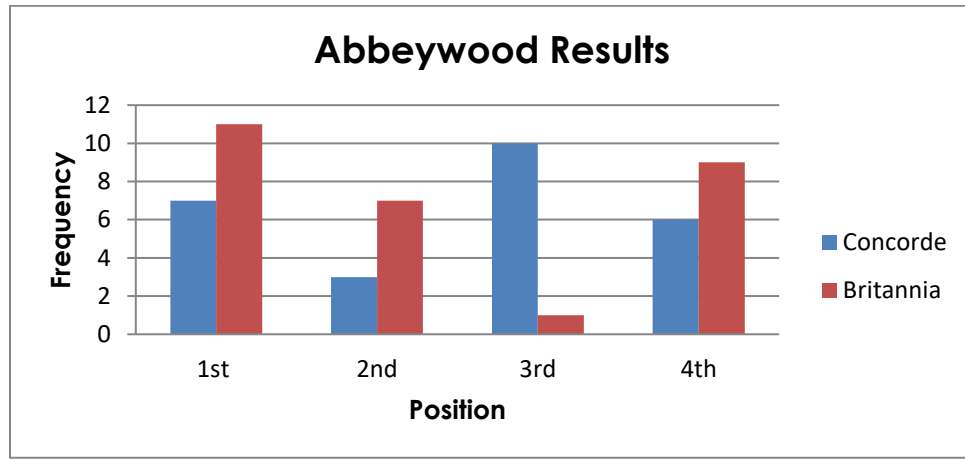Run 100metres at 10 metres per second

Challenge

Run the 400 metres at 12.5 metres per second

Super Challenge

Run the 1500 metres at 8 metres per second

Question 9

Abbeywood Results

Bar chart showing Frequency (y-axis, 0 to 12) against Position (x-axis: 1st, 2nd, 3rd, 4th) for Concorde and Britannia.

- 1st: Concorde 7, Britannia 11
- 2nd: Concorde 3, Britannia 7
- 3rd: Concorde 10, Britannia 1
- 4th: Concorde 6, Britannia 9

Core

How many people came first from Concorde? How many people came first from Britannia?

Challenge

How many people in total came 1st, 2nd, 3rd or 4th?

Super Challenge

Overall, who did better – Concorde or Britannia? Justify your answer

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Question 10

This is the size of a long jump pit.

9 metres

3 metres

Core

Calculate the area of the long jump sand pit

Challenge

The depth of the pit is 50cm. Calculate the volume of sand in the pit.

Super Challenge

The school need to purchase sand for the pit. If sand costs £81.95 per cubic metre calculate the cost of the sand to the nearest pound.