Statistics Set C

| 40	47	47	22	33	34	33	51	52	58	59	65	37	37	39
56	55	65	44	46	46	46	55	75	45	45	46	48	55	53
43	44	45	59	59	39	38	28	25	40	63	70	55	54	43
33	31	39	39	41	40	31	89	42	43	42	41	45		

Above is a set of data showing the recorded times that it took each child in a group to run 200m.

1. Transfer the information from the table above into the frequency table below.

Time, t s	Tally	Frequency		
$20 < t \le 30$				
$30 < t \le 36$				
$36 < t \le 42$				
$42 < t \le 50$				
$50 < t \le 60$				
$60 < t \le 90$				

  a. In what class interval does the median fall?

  b. What is the modal class?

  c. Calculate an estimate of the mean.

d. Draw a frequency polygon of the data shown in the frequency table.
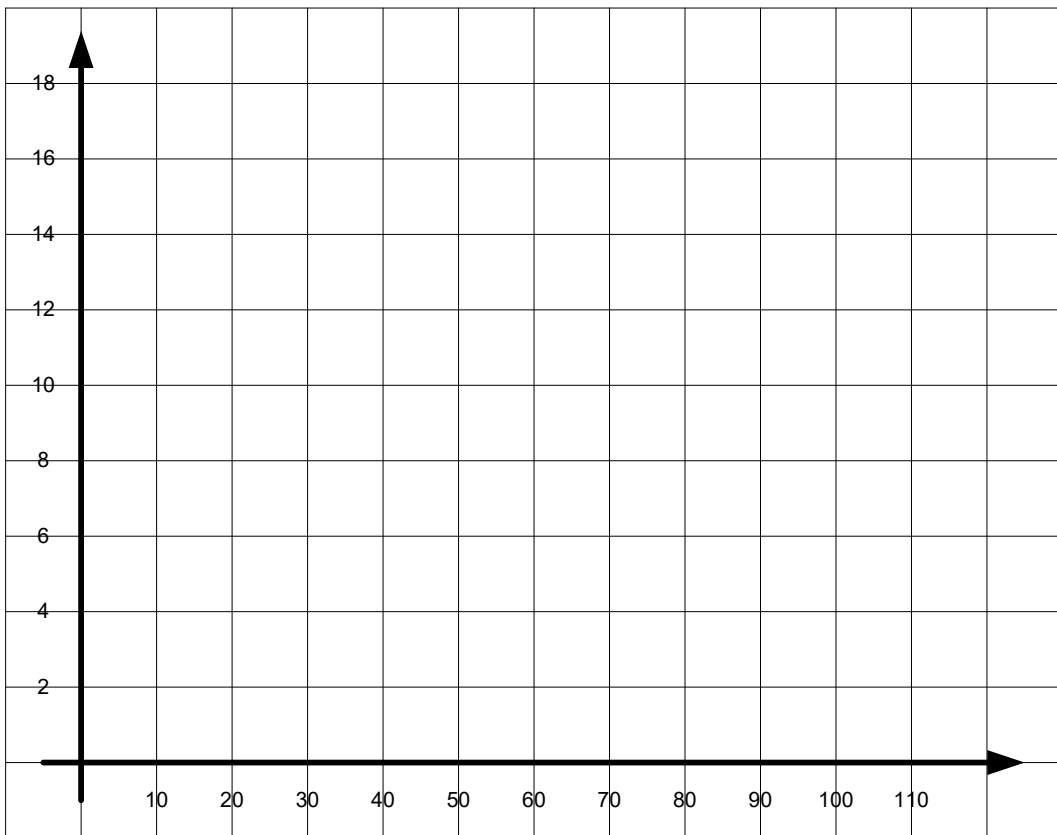
2. Referring to the original data, answer the questions below.

a. What is the median of the data?
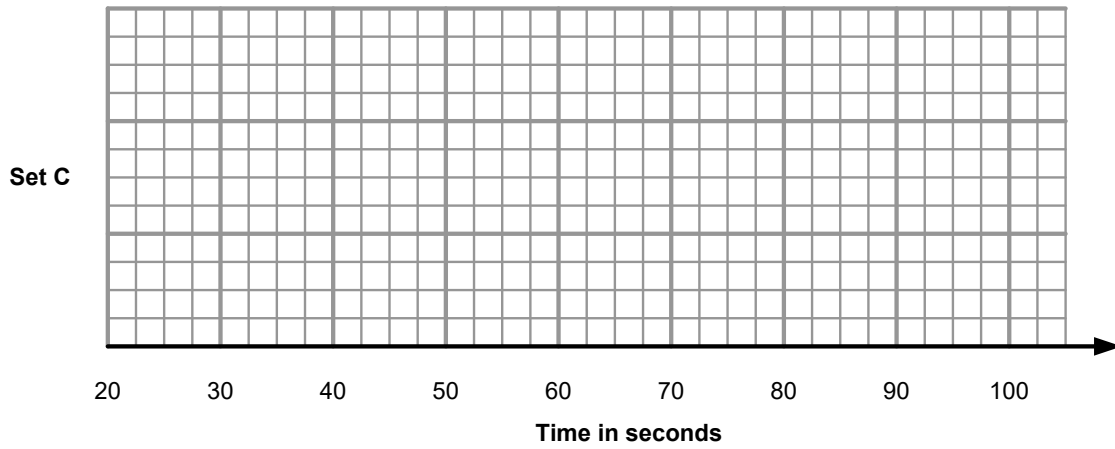
b. What is the mode of the data?

c. Calculate the actual arithmetic mean.
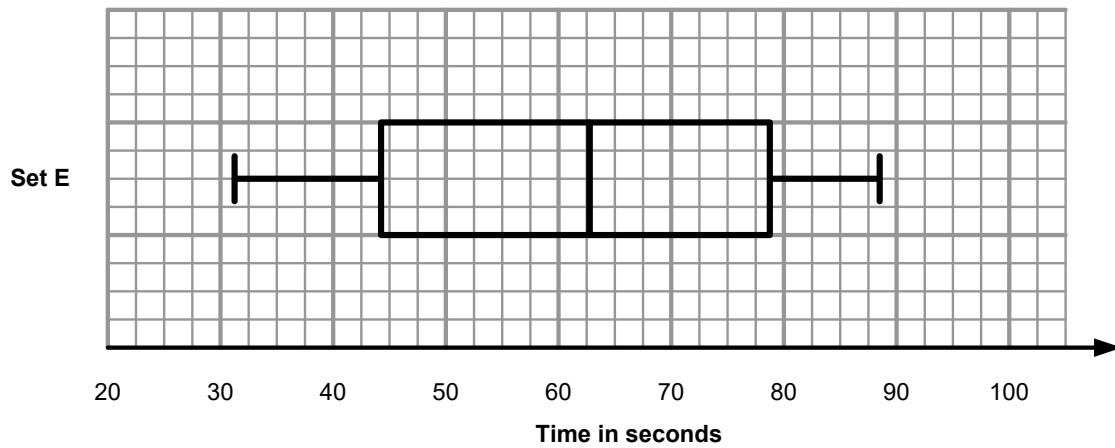
d. What is the range of the data?

e. Calculate the interquartile range.

3.

a. Using the information that you calculated in question 2, complete the box plot below.

Set C

Time in seconds

A box plot has been drawn for another group of students who also ran 200m.

Set E

Time in seconds

b. Compare the distributions of the times of the two groups of students.

_____

_____

_____

_____

_____

4. Re-examine the distribution of the group of students that you have looked at, but this time in terms of **speed**.
    a. Fill in the table below

	Time	**Speed**
Minimum Value		
Lower Quartile		
Median		
Upper Quartile		
Maximum Value		

b. Use the information to draw a box plot on the grid below. Remember to put the scale.

Set C

Speed in metres per second
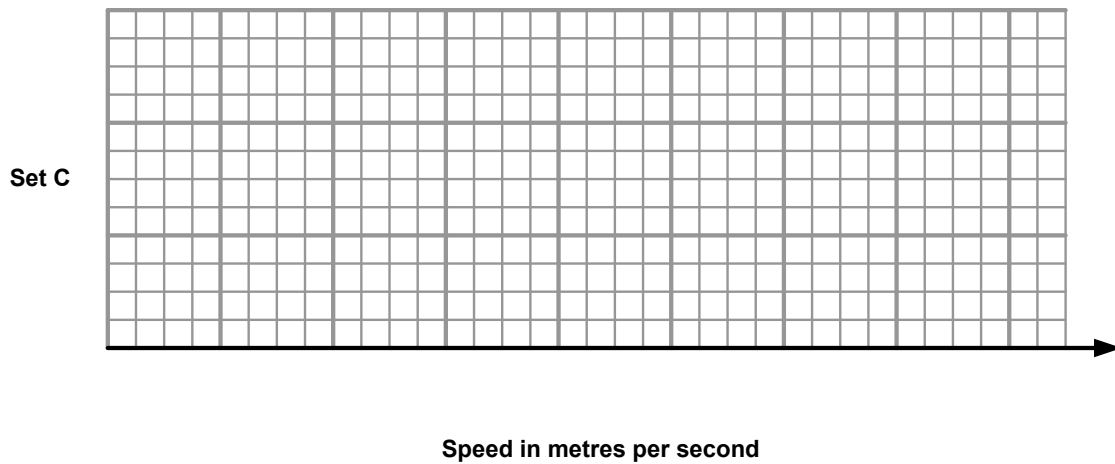
c. Describe the distribution of the speed of the students referring to the location and the spread of the data.

_____

_____