

Year 7 Class 29 questions

Q1

Complete the frequency distribution table for the following data:

21	24	25	23	22	26	25
23	24	21	23	26	23	24

What's the lowest score?

21

How many scores of 24 or more are there?

7

Score	Freq.
21	<input type="text"/> 2
22	<input type="text"/> 1
23	<input type="text"/> 4
24	<input type="text"/> 3
25	<input type="text"/> 2
26	<input type="text"/> 2

Q2

Complete the frequency distribution table for the following data:

12	12	14	15	16	18	13
15	16	17	18	13	16	20
20	19	17	15	12	15	16
17	18	18	19	20	16	19

What is the mode?

16

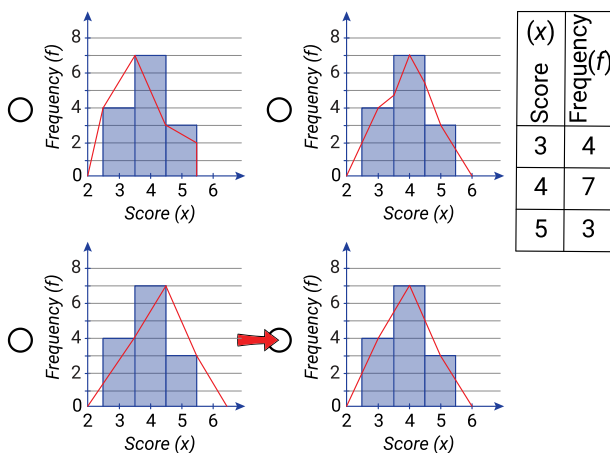
What is the range?

8

Score	Freq.
12	<input type="text"/> 3
13	<input type="text"/> 2
14	<input type="text"/> 1
15	<input type="text"/> 4
16	<input type="text"/> 5
17	<input type="text"/> 3
18	<input type="text"/> 4
19	<input type="text"/> 3
20	<input type="text"/> 3

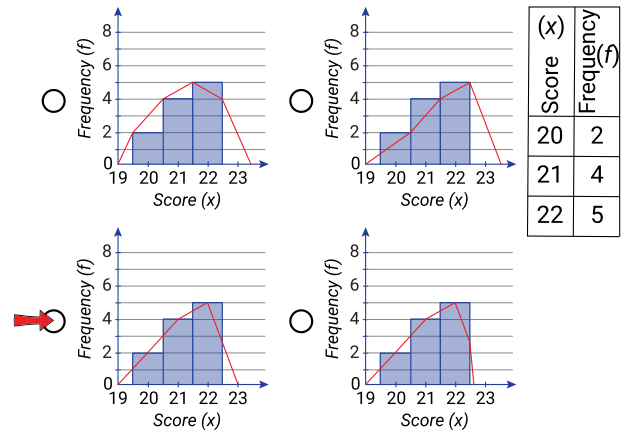
Q3

Select the correct frequency histogram and polygon.



Q4

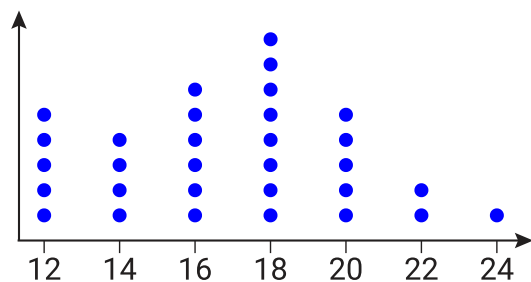
Select the correct frequency histogram and polygon.



Q5

The dot plot below shows the scores students received on a spelling test.

Spelling Test Scores



How many students scored less than 18?

15

How many fewer students scored 12 than scored 18?

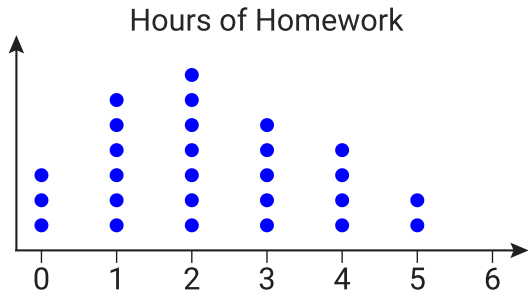
3

What was the most common score?

18

Q6

The dot plot below shows the number of hours students spent doing homework last week.



How many students spent fewer than 3 hours on homework?

16

How many more students spent 3 hours than spent 6 hours?

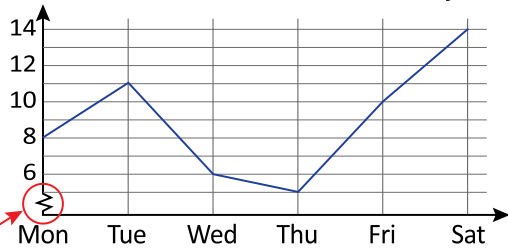
5

What was the most common number of hours spent?

2

Q7

Toni made a note of the number of cakes she made over the last 6 days.



Why is this part of the axis like this?

- So the data can be read more easily
- No reason, probably a mistake

How many cakes did she make on Friday?

10

How many cakes in total did she make on Tuesday and Thursday? 16

How many more cakes did she make on Saturday than on Monday? 6

Find the average number of cakes she made each day. 9

Q8

The number of students in each class is recorded at the start of Period 1.

No. of students	Freq.
5	1
13	3
15	6
28	3
29	4
30	4

How many students were in the largest class?

30

How many classes were there?

21

How many classes had more than 20 students?

11

Q9

The number of runners in each heat of a race are recorded.

No. of runners	Freq.
8	6
9	8
10	2
11	1

How many heats were held?

17

What is the modal (mode) number of runners in a race?

9

What is the range?

3

Q10

Robert recorded the grades for his students in a mathematics test.

Grade	No. of students
A	12
B	8
C	11
D	9
E	5

How many students completed the test?

45

How many students scored either a grade C or D?

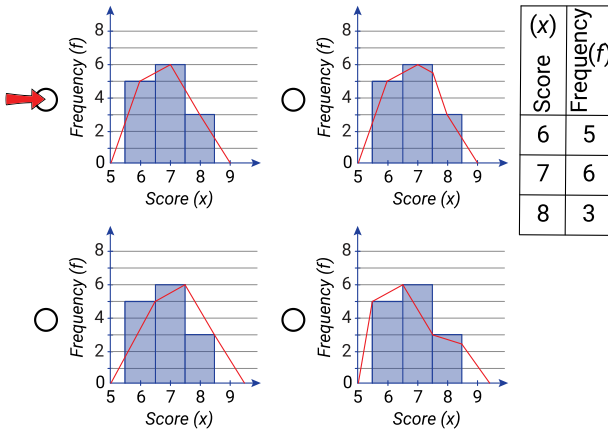
20

Which grade was scored by less than 6 students?

F

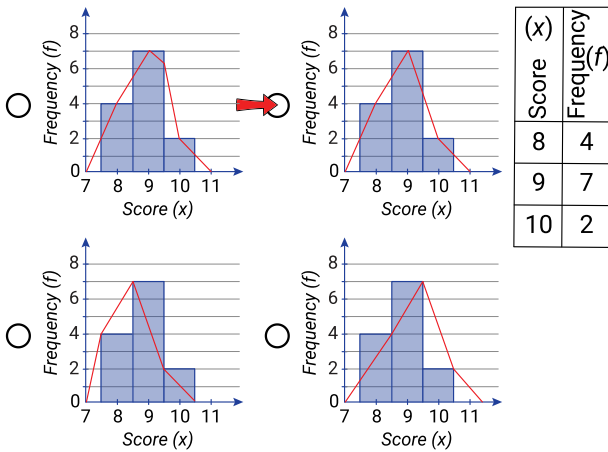
Q11

Select the correct frequency histogram and polygon.



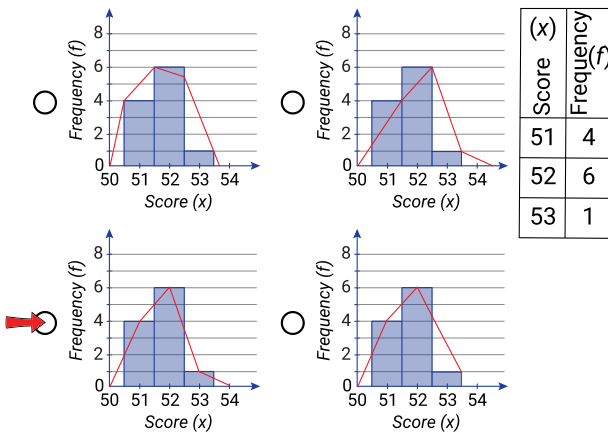
Q12

Select the correct frequency histogram and polygon.



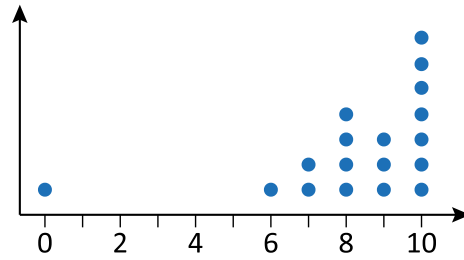
Q13

Select the correct frequency histogram and polygon.



Q14

Phil recorded the number of chin-ups he completed each day.



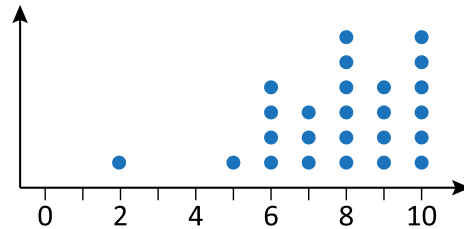
What is the mode?

An outlier is a value that is much smaller or larger than most other values in a data set. What is the outlier?

Calculate the mean number of chin-ups. (1 d.p.)

Q15

James recorded the number of sit-ups he completed each day.



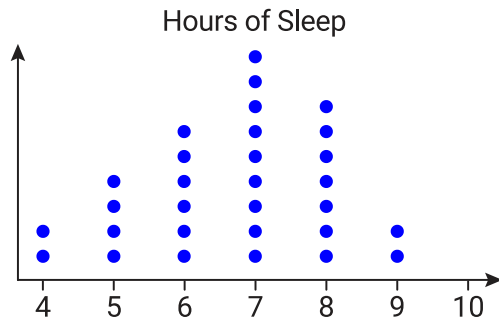
An outlier is a value that is much smaller or larger than most other values in a data set. What is the outlier for this data set?

What is the mean?

On how many days did he complete more than 7 sit-ups?

Q16

The dot plot below shows the number of hours students slept last night.



Complete the frequency table for this data.

Hours of Sleep	Frequency
4	<input type="text" value="2"/>
5	<input type="text" value="4"/>
6	<input type="text" value="6"/>
7	<input type="text" value="9"/>
8	<input type="text" value="7"/>
9	<input type="text" value="2"/>
10	<input type="text" value="0"/>

How many students slept fewer than 7 hours?

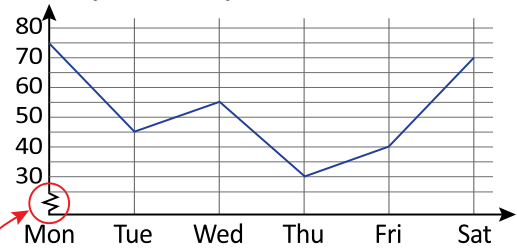
12

What fraction of students slept at least 8 hours?

- $\frac{3}{10}$ $\frac{5}{27}$ $\frac{4}{9}$ $\frac{7}{27}$

Q17

The number of books returned to a library each day was recorded.



Why is this part of the axis like this?

- So the data can be read more easily
 No reason, probably a mistake

How many books were returned on Friday?

40

How many books in total were returned on Monday and Tuesday?

120

How many more books were returned on Saturday than on Thursday?

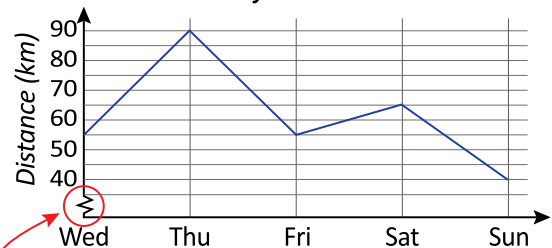
40

Find the average number of books returned each day.

52.5

Q18

Matt kept a driving log of the distance he drove each day.



Why is this part of the axis like this?

- So the data can be read more easily
 No reason, probably a mistake

How far did he drive on Wednesday?

km 55

How far in total did he drive on Friday and Sunday?

km 95

How much further did he drive on Thursday than on Sunday?

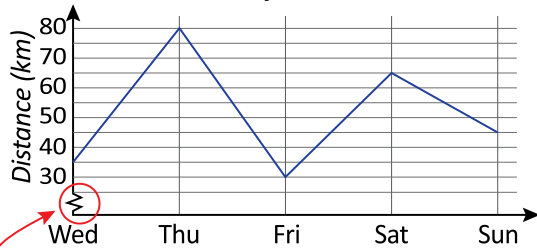
km 50

Find the average distance he drove each day.

km/day 61

Q19

Lauren kept a driving log of the distance she drove each day.



Why is this part of the axis like this?

- So the data can be read more easily
 No reason, probably a mistake

How far did she drive on Wednesday?

km 35

How far in total did she drive on Friday and Sunday? km 75

How much further did she drive on Thursday than on Sunday? km 35

Find the average distance she drove each day. km/day 51

Q20

Score	Freq.
7.5	2
10	5
12.5	3
15	2
17.5	2
20	1

Mode = 10

How many scores are greater than the mode?

8

How many scores are less than or equal to the mode?

7

Q21

Timothy recorded the number of people who were living in each apartment in a building.

No. of people	No. of apartments
1	15
2	35
3	18
4	26
5	3
6	1

What is the range?

5

How many apartments are in the building?

98

How many people in total live in the building?

264

Q22

The number of students in each class is recorded on Monday?

No. of students	Freq.
12	2
15	4
23	5
25	7
28	4
32	6

How many classes were there?

28

What is the mode?

25

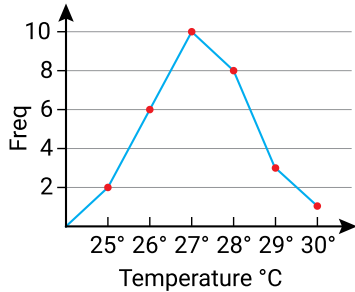
What is the range?

20

Q23

James recorded the maximum temperature each day for a month. The results are shown in this frequency polygon. Use the graph to complete the frequency distribution table.

Temp °C	Freq.
25	2
26	<input type="text"/> 6
27	10
28	<input type="text"/> 8
29	<input type="text"/> 3
30	1



How many days had a maximum temperature of 25°C?

2

What was the highest temperature recorded?

°C 30°C

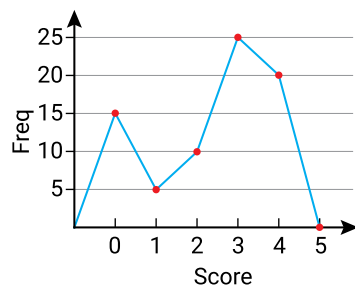
What was the modal (mode) temperature?

°C 27°C

Q24

The contestants in a talent show are given a score out of 5. The results are shown in this frequency polygon. Use the graph to complete the frequency distribution table.

Score	Freq.
0	<input type="text"/> 15
1	<input type="text"/> 5
2	<input type="text"/> 10
3	25
4	<input type="text"/> 20
5	<input type="text"/> 0



What was the range in scores?

4

How many contestants scored 4 or more points?

20

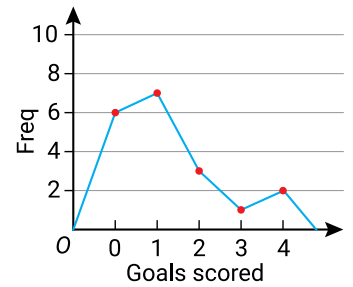
What was the modal (mode) score?

3

Q25

Amelia recorded the number of goals she has scored each game. The results are shown in this frequency histogram. Use the graph to complete the frequency distribution table.

Score	Freq.
0	<input type="text"/> 6
1	7
2	<input type="text"/> 3
3	<input type="text"/> 1
4	2



What was the range in scores?

4

How many games did Amelia play?

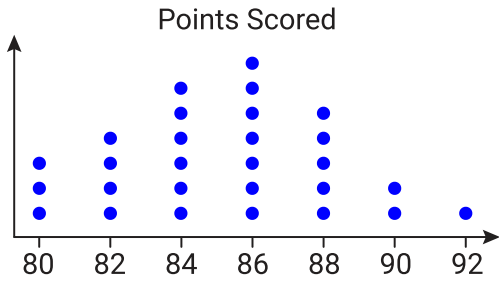
19

How many goals did she score in total?

24

Q26

The dot plot below shows the points scored by a basketball team in each game over a season.



Complete the frequency table for this data.

Points Scored	Frequency
80	<input type="text" value="3"/>
82	<input type="text" value="4"/>
84	<input type="text" value="6"/>
86	<input type="text" value="7"/>
88	<input type="text" value="5"/>
90	<input type="text" value="2"/>
92	<input type="text" value="1"/>

How many games did the team score fewer than 86 points?

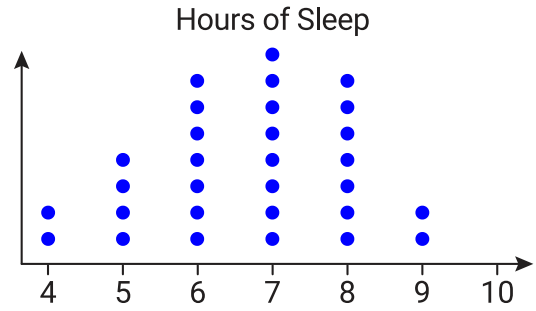
13

The coach set a target of scoring 86-90 points per game. What percentage of games met this target?

- 50.0% 55.6%
 40.7% 37.0%

Q27

The dot plot below shows the number of hours students slept last night.



Complete the frequency table for this data.

Hours of Sleep	Frequency
4	<input type="text" value="2"/>
5	<input type="text" value="4"/>
6	<input type="text" value="7"/>
7	<input type="text" value="8"/>
8	<input type="text" value="7"/>
9	<input type="text" value="2"/>
10	<input type="text" value="0"/>

How many students slept for more than 8 hours?

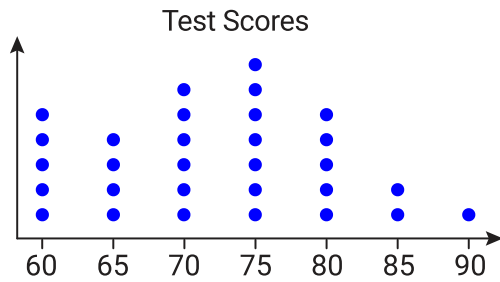
2

Doctors recommend 7-9 hours of sleep for teenagers. What percentage of students met this recommendation?

- 37.0% 56.7%
 55.6% 40.7%

Q28

The dot plot below shows the test scores (out of 100) of students in a science exam.



Complete the frequency table for this data.

Test Score	Frequency
60	<input type="text" value="5"/>
65	<input type="text" value="4"/>
70	<input type="text" value="6"/>
75	<input type="text" value="7"/>
80	<input type="text" value="5"/>
85	<input type="text" value="2"/>
90	<input type="text" value="1"/>

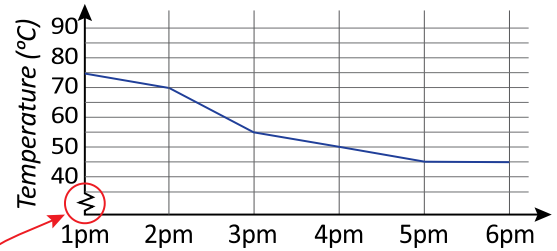
How many students scored at least 80?

Grade B requires a score between 70-80. What percentage of students achieved a grade B?

- 50.0% 65.4%
 60.0% 46.2%

Q29

Rona placed a sample in a cooler box at 1 pm and recorded its temperature each hour.



Why is this part of the axis like this?

- So the data can be read more easily
 No reason, probably a mistake

What temperature was the sample when it was first placed in the box? °C

What temperature was the sample at 3pm? °C

Between what times did the sample cool most quickly?

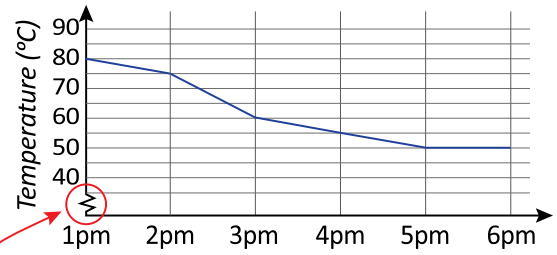
- 1pm to 2pm 3pm to 4pm
 2pm to 3pm 4pm to 5pm

The average rate of cooling (in degrees per hour) is closest to

- 5°C/h 6°C/h 7°C/h 57°C/h

Q30

Jaya placed a sample in a cooler box at 1pm and recorded its temperature each hour.



Why is this part of the axis like this?

- So the data can be read more easily
- No reason, probably a mistake

What temperature was the sample when it was first placed in the box? °C 80

What temperature was the sample at 3pm? °C 60

Between what times did the sample cool most quickly?

- 1pm to 2pm
- 2pm to 3pm
- 3pm to 4pm
- 4pm to 5pm

The average rate of cooling (in degrees per hour) is closest to

- 6°C/h
- 5°C/h
- 7°C/h
- 62°C/h