DATA MANAGEMENT AND PROBABILITY

- collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including continuous line graphs

- read, describe, and interpret data, and explain relationships between sets of data

- determine the theoretical probability of an outcome in a probability experiment, and use it to predict the frequency of the outcome

6 – DMP – PRE TEST (4 QUESTIONS). LEVEL:

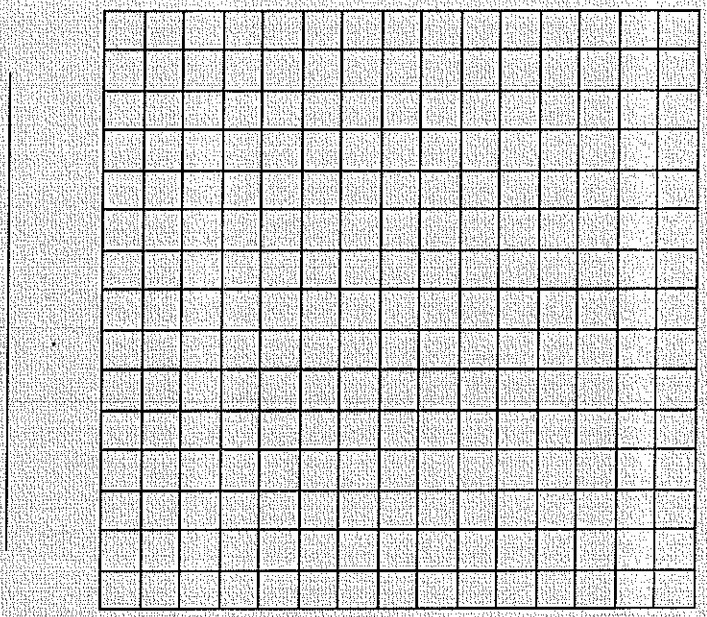
FIRST NAME, LAST NAME:	CLASS:

25 The table below shows the weekly video sales at a store over a five-week period.

Videos Sold

Week	1	2	3	4	5
Number of videos sold	550	325	275	100	50

Draw a broken-line graph to represent this data. Show titles and labels on the graph.



Explain why a broken-line graph is the most appropriate graph to represent this data.

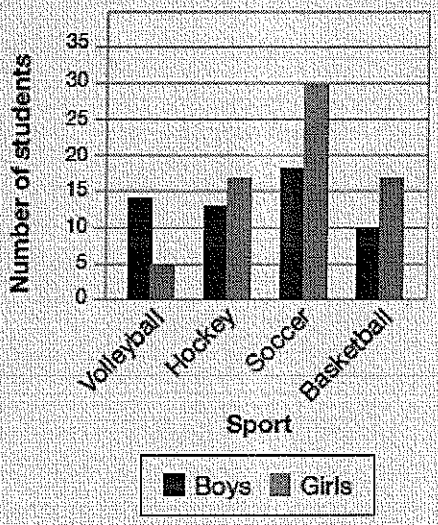
18 The table below shows data about participating in school sports.

School Sports

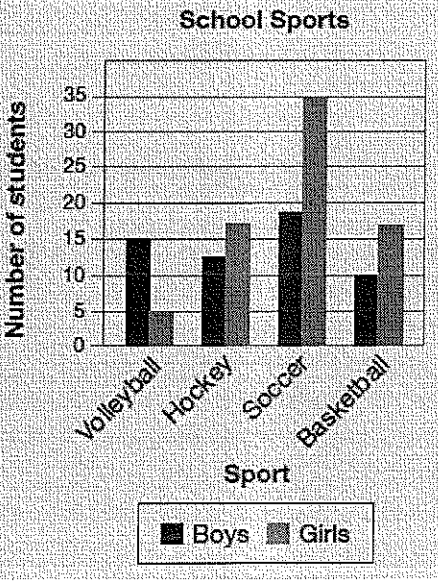
Sport	Number of boys	Number of girls
Volleyball	14	5
Hockey	13	17
Soccer	18	35
Basketball	13	17

Which graph represents this data?

a



b



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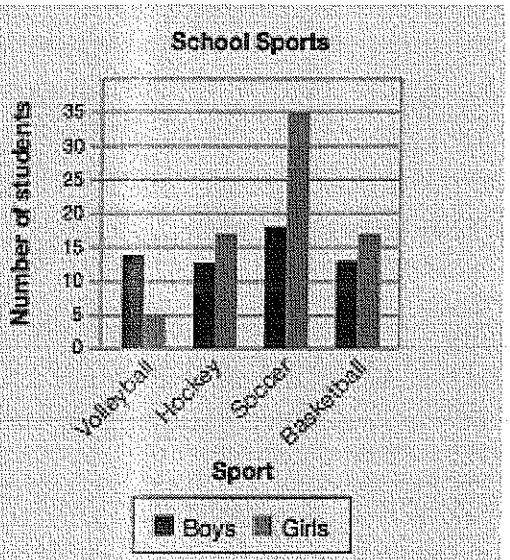

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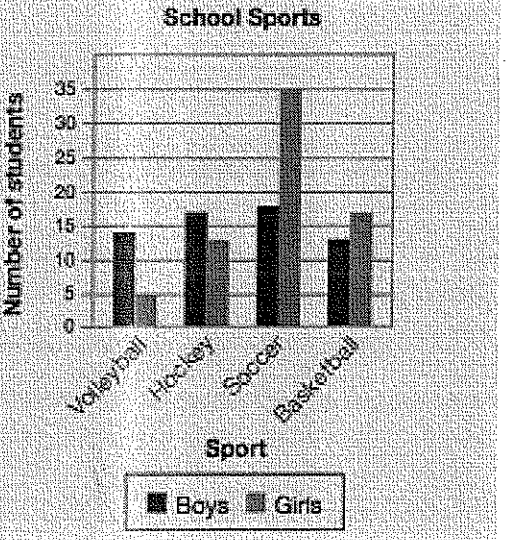


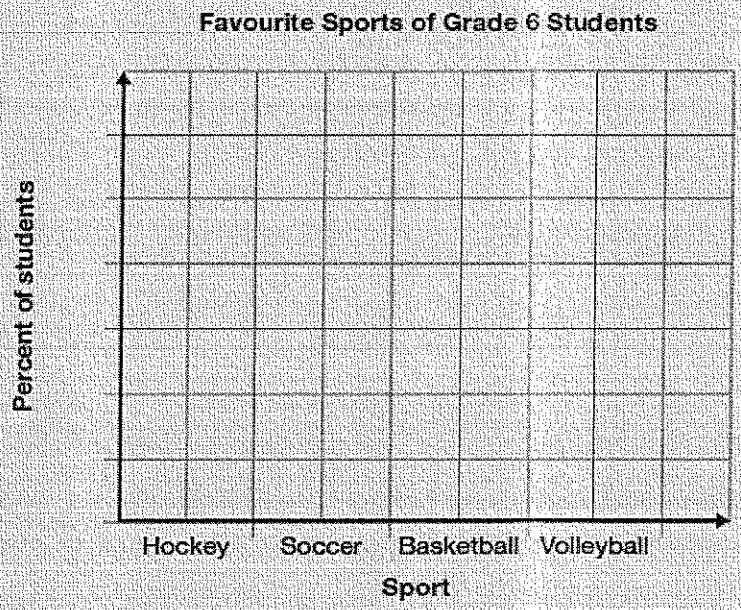
26 Some Grade 6 students participate in a survey about their favourite sports.

The results are shown in the table below.

Complete the table.

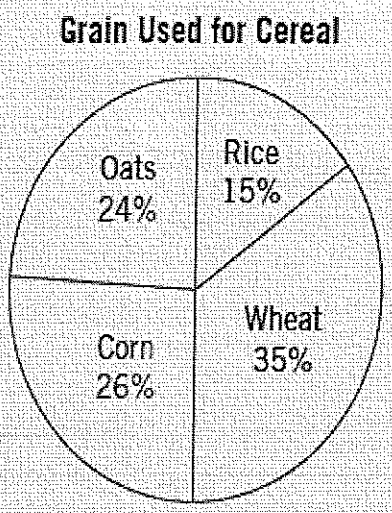
Sport	Number of students	Percent of students
Hockey	22	
Soccer	11	
Basketball	14	
Volleyball	3	

Complete the graph below using the percents.



Show your work. How did you calculate the percentage?

6 The graph below shows grain used to make cereal at a breakfast food factory.



Based on the graph, which of the following statements is true?

a The amount of wheat used is more than the combined amount of corn and oats.

b The amount of corn used is more than the combined amount of oats and rice.

c The combined amount of wheat and rice used is the same as the combined amount of corn and oats.

d The combined amount of oats and rice used is the same as the amount of wheat.

6 – DMP – BENCHMARK TEST #1 (3 QUESTIONS). LEVEL:

FIRST NAME, LAST NAME:	CLASS:

26 Johnna is planning a survey of students in her classroom. She wants to find their favourite food for lunch at school. Which of the following would be the best question for Johnna to ask in her survey?

a "What is your favourite food?"

b "What are your friends' favourite foods?"

c "What is your favourite food for lunch at school?"

d "What is your favourite food—a sandwich or soup?"

16 Mr. Christy records the number of sit-ups the students in his class can do in one minute. The table below shows the results for 8 students.

Mr. Christy's Class

Name	Number of sit-ups
Caleb	23
Mireille	34
Jochen	43
Pavel	22
Abdul	43
Sebastian	32
Marina	23
Yusef	33

Which stem-and-leaf plot displays the same data?

a **Number of Sit-ups**

Stem	Leaf
2	2 3
3	2 2 3 4 4
4	4

b **Number of Sit-ups**

Stem	Leaf
2	2 3
3	2 3 4
4	3

c **Number of Sit-ups**

Stem	Leaf
2	2 3 3
3	3 3 4
4	3 4

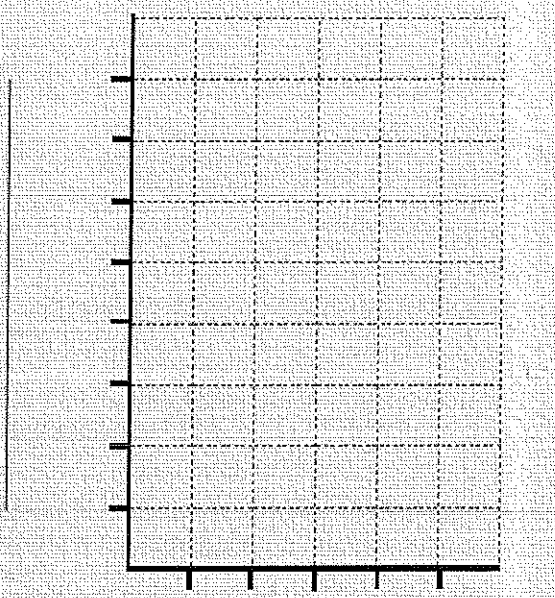
d **Number of Sit-ups**

Stem	Leaf
2	2 3 3
3	2 3 4
4	3 3

27 Ranjit makes the chart below to record the amount of money collected during a fundraising event.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Amount of Money Collected	$50	$125	$75	$25	$175

Make a broken-line graph to represent the data. Remember to include all titles and labels.



Explain your choice of scale.

6 – DMP – BENCHMARK TEST #2 (2 QUESTIONS). LEVEL:

FIRST NAME, LAST NAME:	CLASS:

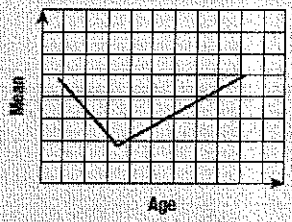
26 Some students are asked to test a new video game. The students are sorted by their ages, and the mean score for each age group is calculated. The table below shows a comparison of age and the mean of the video game scores.

Video Game Scores

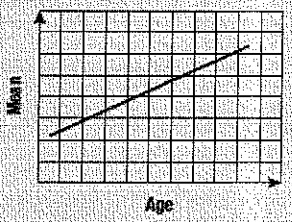
Age	Mean
11	400
12	450
13	500
14	550
15	500
16	450
17	400
18	350

Which graph below best represents the results from this table?

F



G



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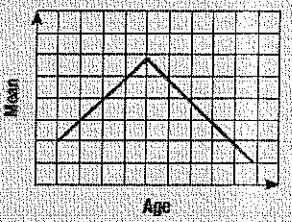

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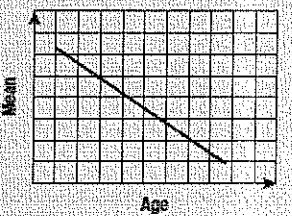


Prove your answer in the space below:

11 Maddie's and Lisa's scores on 5 math quizzes are shown in the table below.

Math Scores out of 30

Maddie's scores	20	23	28	21	23
Lisa's scores	21	22	26	25	26

According to the data in the table, Maddie's mean score is

a lower than Lisa's mean score.

b the same as Lisa's mean score.

c higher than Lisa's median score.

d the same as Lisa's median score.

Prove your answer in the space below:

6 – DMP – BENCHMARK TEST #3 (3 QUESTIONS). LEVEL:

FIRST NAME, LAST NAME:	CLASS:

9 Eric and Todd take 4 science tests. The table below shows Eric's 4 scores and 2 of Todd's scores.

Science Test Scores

Student	Test 1	Test 2	Test 3	Test 4	Mean test score
Eric	86	79	85	82	
Todd		85		89	

Todd's mean for the four tests is five points higher than Eric's. Complete the table above by entering Todd's mean test score and possible scores for his Test 1 and Test 3.

Justify your answers.

13 The pictograph below shows the number of goals scored by three hockey teams.

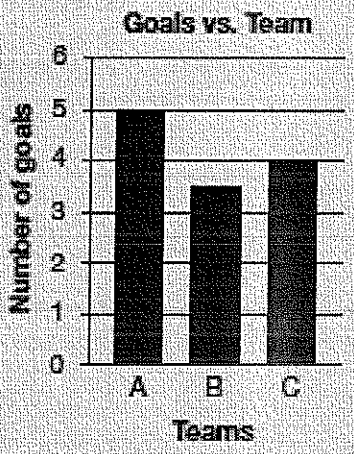
Goals

Hockey team	Number
A	
B	
C	

Key
Each  represents 12 goals.

Which bar graph represents the data shown in the pictograph?

a



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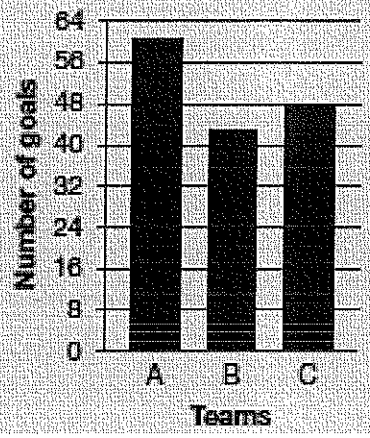

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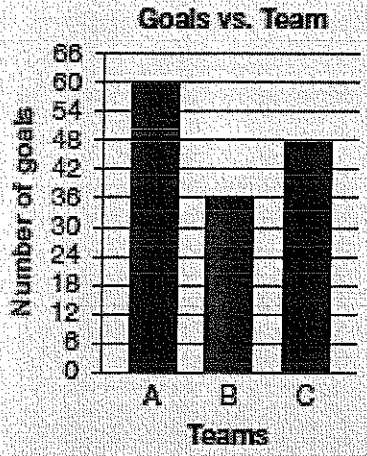

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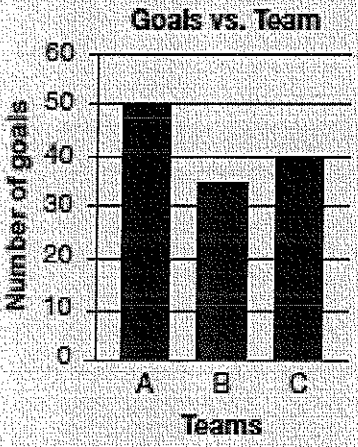


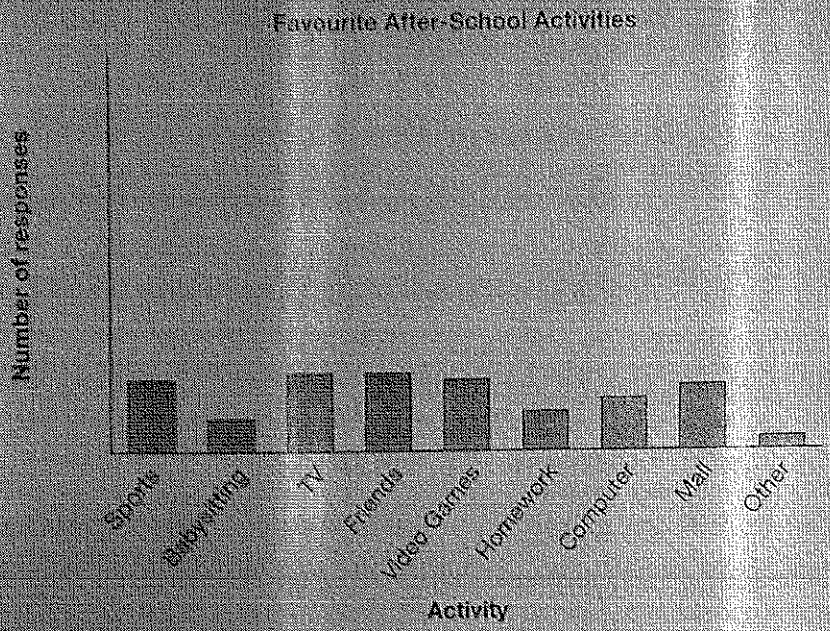
Performance Task 1: Favourite After-School Activities (page 1)

A group of Grade 7 and 8 students answered a survey about favourite after-school activities. Here is the data table that two of the students, Kevin and Lisa, created.

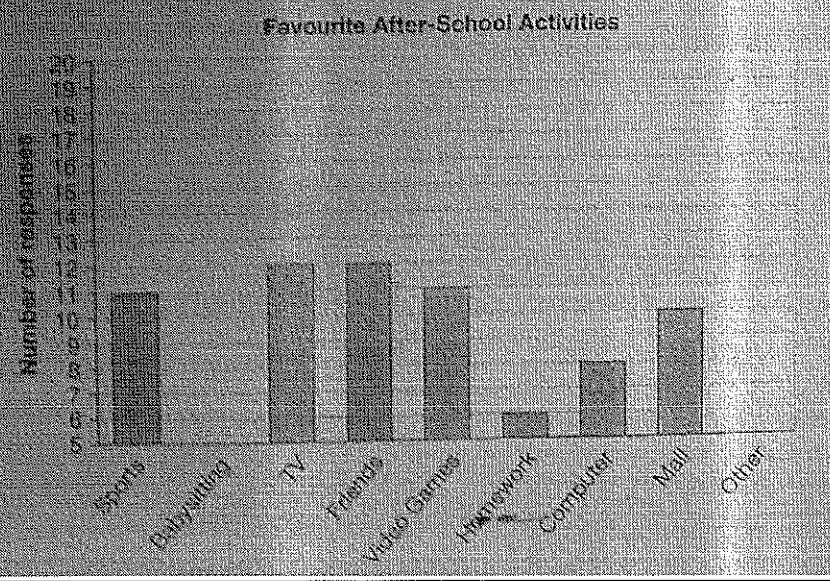
What Are Your Favourite After-School Activities?	
Activity	**Number of Responses**
Playing sports	11
Babysitting	5
Watching TV	12
Spending time with friends	12
Playing video games	11
Doing homework	6
Working/playing on the computer	8
Going to the mall	10
Other	2

Performance Task 1: Favourite After-School Activities (page 2)

1. Kevin created a graph to show the data from his school. The scale on Kevin's graph is missing. Using the data in the table, write the scale on the graph.



2. Using the same data, Lisa created the following graph:



Performance Task 1: Favourite After-School Activities (page 3)

2. a) In what ways is Lisa's graph easier to interpret than Kevin's?

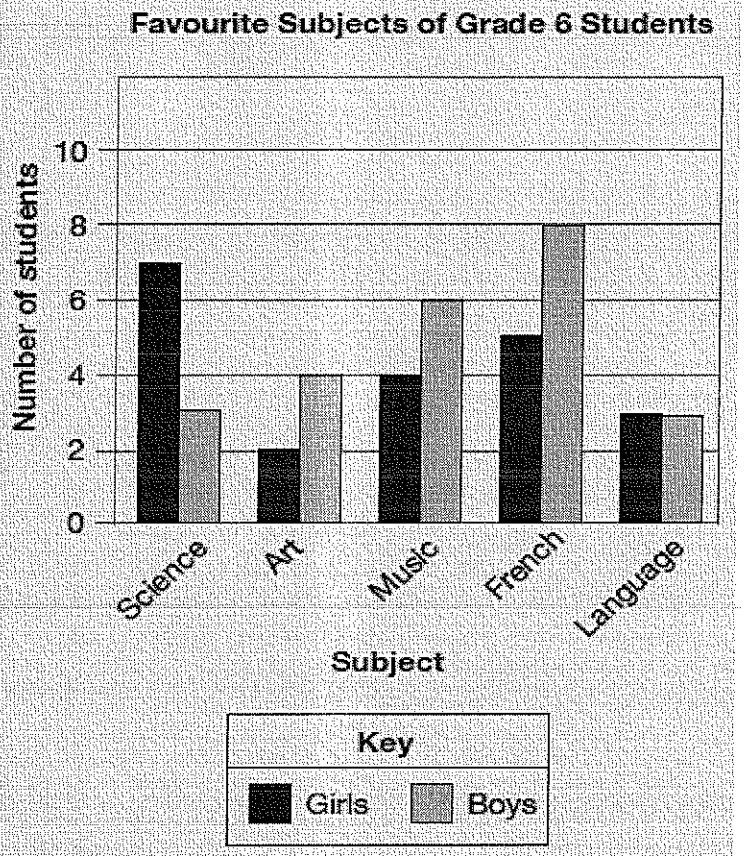
b) In what ways is Lisa's graph mathematically incorrect?

3. What ideas does Lisa's graph communicate that are different from the ideas communicated by Kevin's graph?

6 – DMP – POST TEST (4 QUESTIONS). LEVEL:

FIRST NAME, LAST NAME:	CLASS:

4 The following graph shows the favourite subjects of some Grade 6 students.



Based on the data in the graph, which of the following statements is true?

a Most boys chose science as their favourite subject.

b Science is the least favourite subject of these students.

c French is the favourite subject of twice as many students as music.

d Twice as many girls chose music as chose art as their favourite subject.

28 Kyla is a member of the starting lineup of the school's basketball team. The heights of the other starting players are shown below.

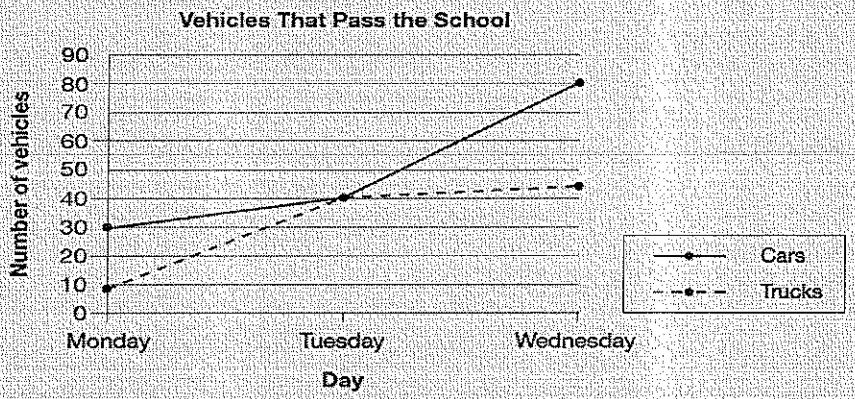
160 cm, 156 cm, 148 cm, 147 cm

The mean height of the starting lineup is 152.4 cm. What is Kyla's height?

Show your work.

Kyla's height is _____.

8 Matthew collects data about the vehicles that pass his school over three days. He makes the graph below.



Matthew concludes that about twice as many cars as trucks pass the school over the 3-day period.

Is his conclusion correct?

Circle one: Yes No

Justify your answer:

29 Jason plays on his school's basketball team. The table below shows the number of points Jason scores in the first 9 games of the season.

Jason's Points

Game	Points
1	8
2	6
3	8
4	6
5	10
6	35
7	10
8	8
9	8

Explain why the mean does not truly represent Jason's usual performance.

Explain your thinking.