

868



TUTORS

Preparation for

High School Mathematics Statistics II

(Cumulative Frequency Curves and Pie Charts)

Math



Instructions and Tips:

- ✓ **You have 90 minutes to complete this worksheet**
- ✓ **This worksheet consists of 6 questions**
- ✓ **Write answers in the spaces provided**
- ✓ **All working must be clearly shown**



Student Name: _____

Student ID: _____

Date: __ / __ / ____

Total Score:

Highest Score:

Tutor's Comments:

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Question 1

The table below illustrates the money spent on market goods to the nearest dollar, for persons visiting a vegetable stall.

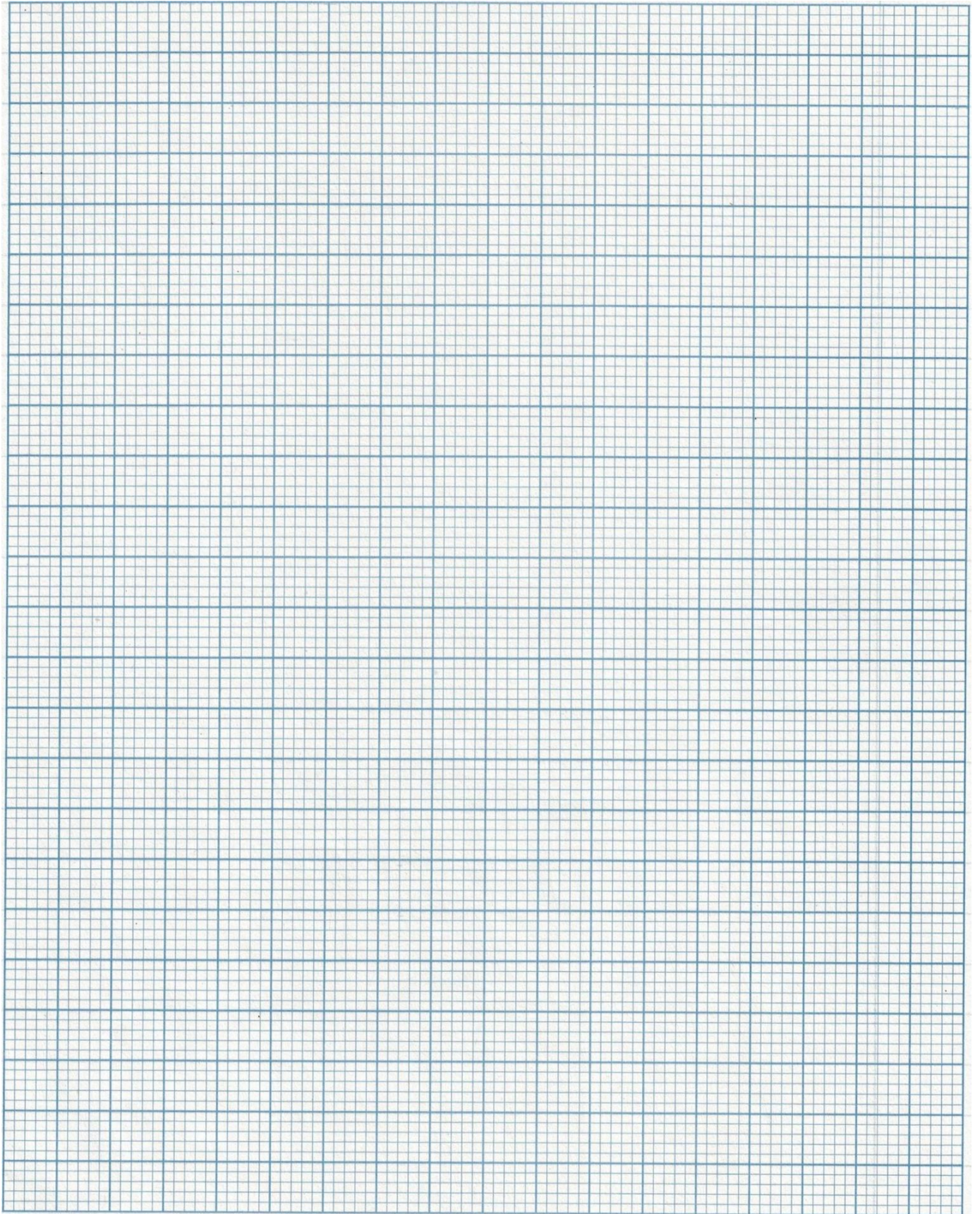
Money spent in Trinidad and Tobago Dollars (TTD)	Number of persons	Cumulative Frequency
20-29	7	
30-39	9	
40-49	10	
50-59	20	
60-69	15	
70-79	8	
80-89	5	

(a) Complete the table above

(2 marks)

(b) Using appropriate scales (TTD on the x-axis and persons on the y-axis), draw the cumulative frequency curve for this data on the provided graph paper.

(4 marks)



(c) Use the Cumulative Frequency Curve that you have drawn to determine (estimate with the use of lines).

(i) the median cost

(2 marks)

(ii) the number of people who spent at least 65 TTD on goods



(2 marks)

(iii) the probability that a person, picked at random from the group, spent less than 40 TTD

(2 marks)

Question 2

The table below illustrates the waiting time to the nearest minute, at a popular fast-food restaurant in Rancho Quemado, Trinidad.

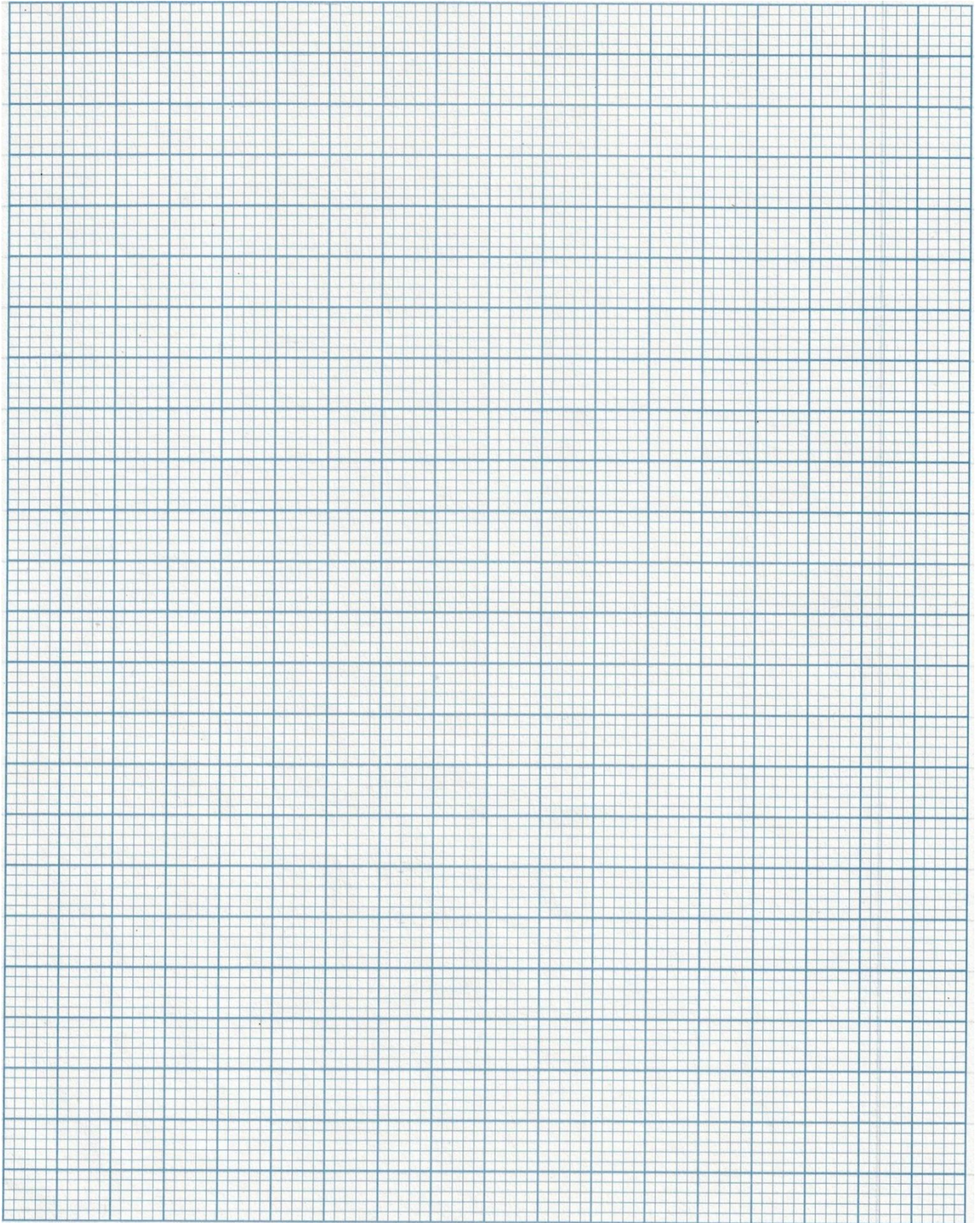
Waiting Time (minutes)	Number of persons	Cumulative Frequency	Points to be plotted (x,y)
1-5	20		(5.5,20)
6-10	25		
11-15	30		
16-20	35		
21-25	15		
26-30	5		
31-35	1		

(a) Complete the table shown above.

(2 marks)

(b) Using appropriate scales (minutes on the x-axis and persons on the y-axis), draw the cumulative frequency curve for this data on the provided graph paper.

(4 marks)



(c) Use the Cumulative Frequency Curve that you have drawn to determine (estimate with the use of lines).

(i) the median waiting time

(2 marks)

(ii) the number of people who waited at least 15 minutes



(2 marks)

(iii) the number of people who waited at least 20 minutes

(2 marks)

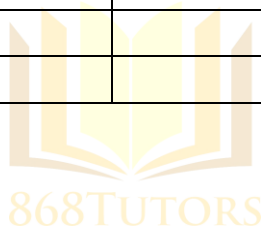
(iv) What is the name given to the shape of the curve that you have drawn?

(1 mark)

Question 3

The table below illustrates the number of hours (to the nearest hour) spent on academic activities in a Carnival long weekend for a group of secondary school students.

Number of hours (academic activities)	Number of persons	Cumulative Frequency	Points to be plotted (x,y)
1-3	1		(3.5,1)
4-6	3		
7-9	5		
10-12	20		
13-15	15		
16-18	5		
19-21	2		

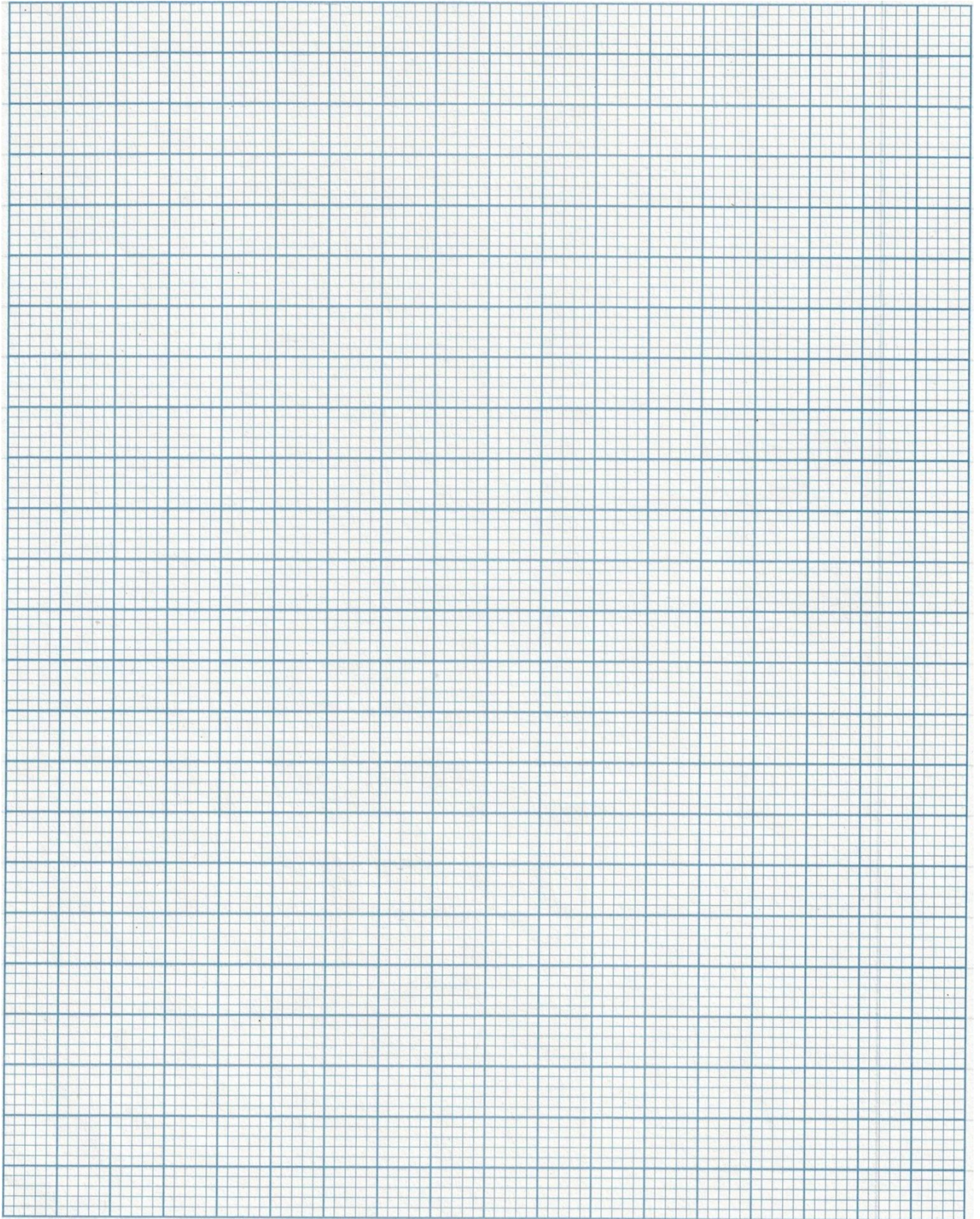


(a) Complete the table shown above.

(2 marks)

(b) Using appropriate scales (hours on the x-axis and persons on the y-axis), draw the cumulative frequency curve for this data on the provided graph paper.

(4 marks)



(c) Use the Cumulative Frequency Curve that you have drawn to determine (estimate with the use of lines).

(i) the median number of hours

(2 marks)

(ii) the number of people who dedicated at least 16 hours to academic activities



(2 marks)

(iv) the number of people who dedicated less than 4 hours to academic activities

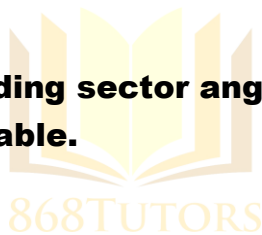
(2 marks)

Question 4

The table below illustrates the weekend plans of families in a community in southern Trinidad.

Weekend Plan	Number of families	Sector angle
Visit Los Iros Beach	10	
Visit Clifton Hill Beach	15	
Travel to Tobago	25	
Observe Carnival celebrations in Cedros	20	
Spend time at home	5	

(a) Calculate the corresponding sector angles required to draw a pie chart and complete the table.



(5 marks)

(b) Draw and label a pie chart to represent the information in the aforementioned table.



(5 marks)

Question 5

The information in the table below represents the favourite fast foods of a group of Form 6 students.

Food	Number of students	Sector angle
Doubles	30	
Fried Chicken	20	
Jerk Chicken	12	
BBQ Chicken	10	
Pizza	8	

(a) Calculate the sector angles required to draw a pie chart and complete the table.



(5 marks)

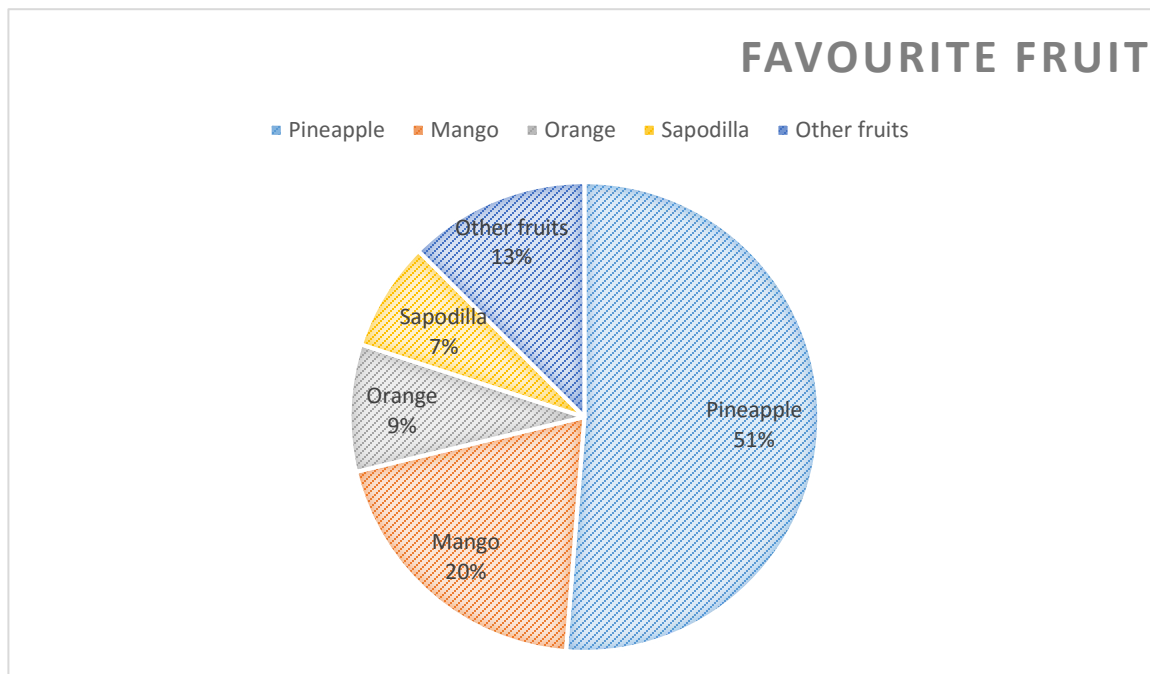
(b) Draw and label a pie chart to represent the information in the aforementioned table.



(5 marks)

Question 6

A group of 100 students were surveyed to determine their favourite fruits. The information is presented in the Pie Chart shown below:



(a) Interpret the data and calculate the sector angle for the section of the pie chart that represents students who prefer mangoes.

(2 marks)

(b) Interpret the pie chart and complete the table (Show all working).

Favourite Fruit	Number of students
Pineapple	51
Mango	
Orange	
Sapodilla	



(3 marks)



END OF WORKSHEET

