(b) Vegeterian

$9+5=14$

Total $= 9+5+20+16+10+15 = 75$

$\frac{14}{75} \times 100$

$= 18.67$

(c)

| Choosen meal | Number |
|---|---|
| Chicken Cordon bleu | 𝍸 𝍸 𝍸 \| |
| New york steak | 𝍸 𝍸 𝍸 𝍸 |
| Pasta Primavera (vegeterian) | 𝍸 \| |
| lamb Chop | 𝍸 𝍸 \| |
| Grilled Salmon | 𝍸 𝍸 |
| Mushroom (vegeterian) | 𝍸 |

Each 𝍸 represents one number of people.

(d) less than half of respondent

1

(a) Number of ages in seen in more than one group for example 42, 48 and therefore a class with is uneven and hence the frequency might be affected.

(b) The age bracket between 81-90 is not covered. and therefore the table does not represent all range of ages between 61 - 95

2. (a) bar graph.
This does not have continous frequency.

(b) histogram
It has some even classes

(c) bar graph.
Ages can vary and maybe some age brackets can lack members

(d) histogram
height of the playere is continous

3

(a)

6

dice has 6 sides

Probability of getting each side

$$\frac{1}{6} \times 30$$

$$= \frac{30}{6} = 5$$

(b)

| Phase of a dice | frequency |
|---|---|
| 1 | 7 |
| 2 | 3 |
| 3 | 6 |
| 4 | 4 |
| 5 | 8 |
| 6 | 2 |

d ~~t~~ There is a difference due to Chances

(c) Eb using lower class limit

| Score | Tally | frequency | Cumm fre | mid points | Relative frequ |
|---|---|---|---|---|---|
| 39.5 - 44.5 | III | 3 | 3 | 42 | 0.111 |
| 44.5 - 49.5 | I | 1 | 4 | 47 | 0.039 |
| 49.5 - 54.5 | II | 2 | 6 | 52 | 0.074 |
| 54.5 - 59.5 | IIII | 4 | 10 | 57 | 0.1481 |
| 59.5 - 64.5 | II | 2 | 12 | 62 | 0.074 |
| 64.5 - 69.5 | II | 2 | 14 | 67 | 0.074 |
| 69.5 - 74.5 | II | 2 | 16 | 72 | 0.074 |
| 74.5 - 79.5 | HH | 5 | 21 | 77 | 0.185 |
| 79.5 - 84.5 | II | 2 | 23 | 82 | 0.074 |
| 84.5 - 89.5 | I | 1 | 24 | 85 | 0.037 |
| 89.5 - 94.5 | III | 3 | 27 | 92 | 0.111 |

o both the frequency polygon and ro

f Frequency polygon helps to shows the change of frequency from one interval to the next.
Relative frequency polygon shows the change of relative frequency to the total scores.
Cummulative frequency shows the total change of frequency from one level to another and total number of scores.

10 (b)

| Salary | Tally | Frequency | Cumulative |
|---|---|---|---|
| 0 - 499 999 | II | 2 | 2 |
| 500000 - 999 999 | 𝍸 𝍸 𝍸 II | 17 | 19 |
| 1 000000 - 1499 999 | II | 2 | 21 |
| 1500 000 - 1999999 | I | 1 | 22 |
| 2000000 - 2499999 | | 0 | 22 |
| 2500000 - 2999999 | | 0 | 22 |
| 3000000 - 3499999 | I | 1 | 23 |
| 3500000 - 3999999 | | 0 | 23 |
| 4000000 - 4499999 | I | 1 | 24 |

(c) Most of Salaries are Concentrated ~~at~~ btwen 0 - 1499,999 hence the data is skewed to the left.

11 The sum of all relative frequencies

$= 1$

Relative frequencies are percent of the total number whose sum is 100%.

$= \frac{100}{100} = 1$

12

| Score | frequency |
|---|---|
| 29.5 - 39.5 | 1 |
| 39.5 - 49.5 | 2 |
| 49.5 - 59.5 | 4 |
| 59.5 - 69.5 | 8 |
| 69.5 - 79.5 | 5 |
| 79.5 - 89.5 | 3 |
| 89.5 - 99.5 | 2 |

7

(a) Ungrouped
The range is very small

(b)

| number of cups | frequency | Tally | cumf |
|---|---|---|---|
| 0 | 2 | II | 2 |
| 1 | 8 | ~~HHH~~ IIII | 10 |
| 2 | 6 | ~~HHH~~ I | 16 |
| 3 | 3 | III | 19 |
| 4 | 1 | I | 20 |

(d) ~~The number~~
From the data most customers ordered 2 and 3 cups and hence the owner has to consider that when setting prices.

8 Grouped.
The range of values is very big.

(b)

| Purchase Amount ($) | Tally | Frequency | Cummulative |
|---|---|---|---|
| 5.00 - 14.99 | II | 2 | 2 |
| 15.00 - 24.99 | III | 3 | 5 |
| 25.00 - 34.99 | ~~HHH~~ | 5 | 10 |
| 35.00 - 44.99 | IIII | 4 | 14 |
| 45.00 - 54.99 | IIII | 4 | 18 |
| 55.00 64.99 | III | 3 | 21 |
| 65.00 74.99 | III | 3 | 24 |
| 75.00 84.99 | II | 2 | 26 |
| 85.00 94.99 | II | 2 | 28 |
| 95 00 104.99 | | 0 | 28 |
| 105.00 114.99 | II | 2 | 30 |

(d) Alot of people use between 5 - 95 dollars and thus they should be highly promoted to use more.

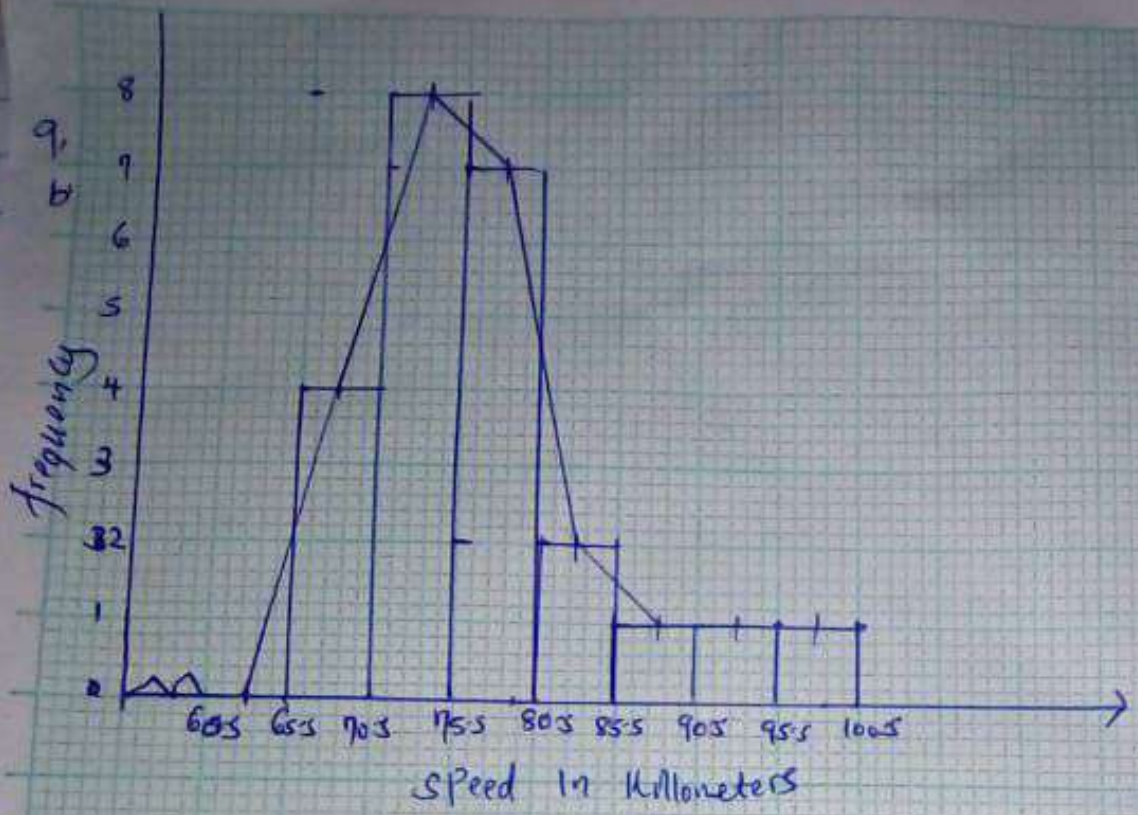
9a

| Speed (Km/h) | Tally | frequency | cummulative | mid points |
|---|---|---|---|---|
| 61 - 65 | | 0 | 0 | 62 |
| 66 - 70 | IIII | 4 | 4 | 67 |
| 71 - 75 | IIII | 8 | 12 | 72 |
| 76 - 80 | IIII | 7 | 19 | 77 |
| 81 - 85 | II | 2 | 21 | 82 |
| 86 - 90 | I | 1 | 22 | 87 |
| 91 - 95 | I | 1 | 23 | 92 |
| 96 - 100 | I | 1 | 24 | 97 |

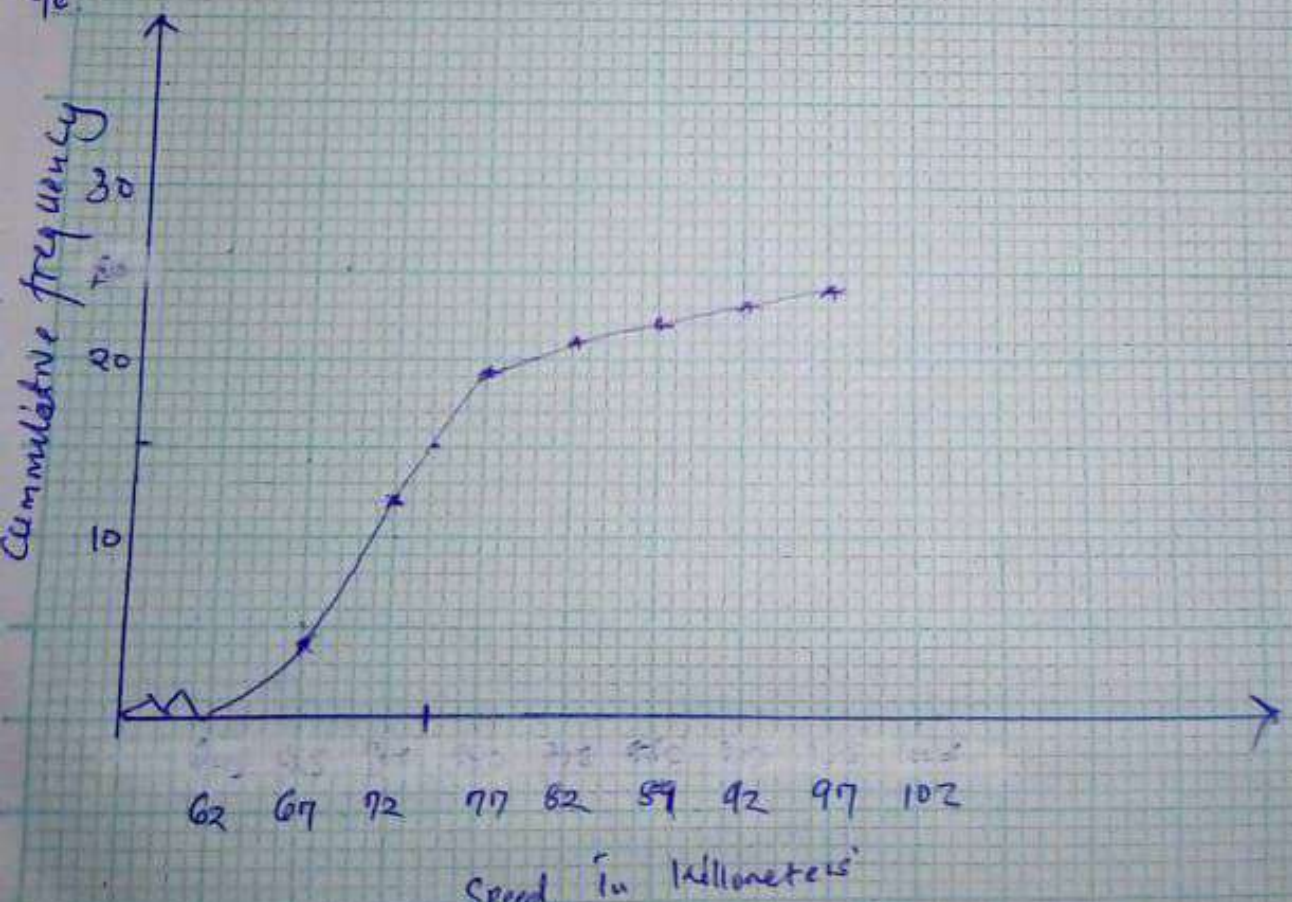
d 12

e 5

9b.


8
7
6
5
4
3
2
1
0
Frequency
60.5
65.5
70.5
75.5
80.5
85.5
90.5
95.5
100.5
Speed in Kilometers

9c.

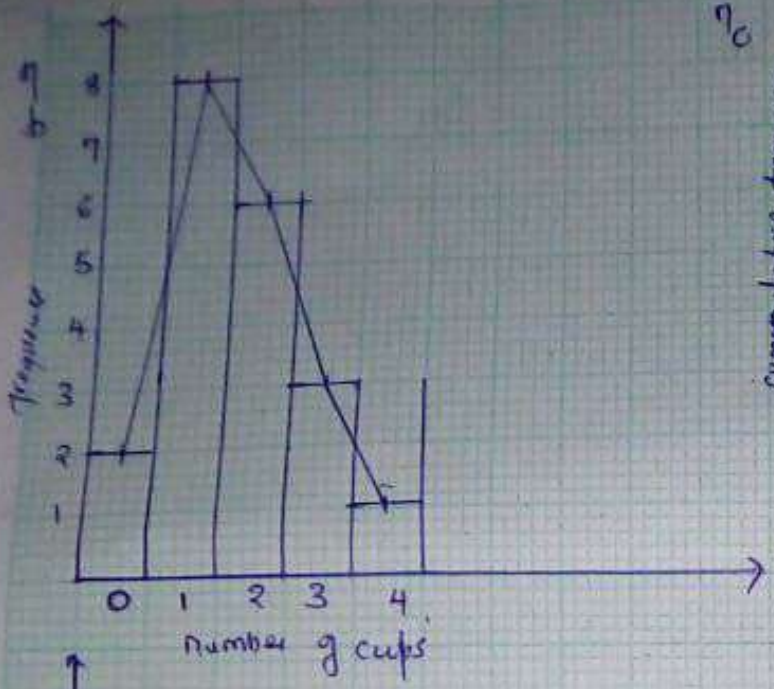

Cummulative frequency
30
20
10
62
67
72
77
82
87
92
97
102
Speed in kilometers

13 From the new ~~ed~~ data

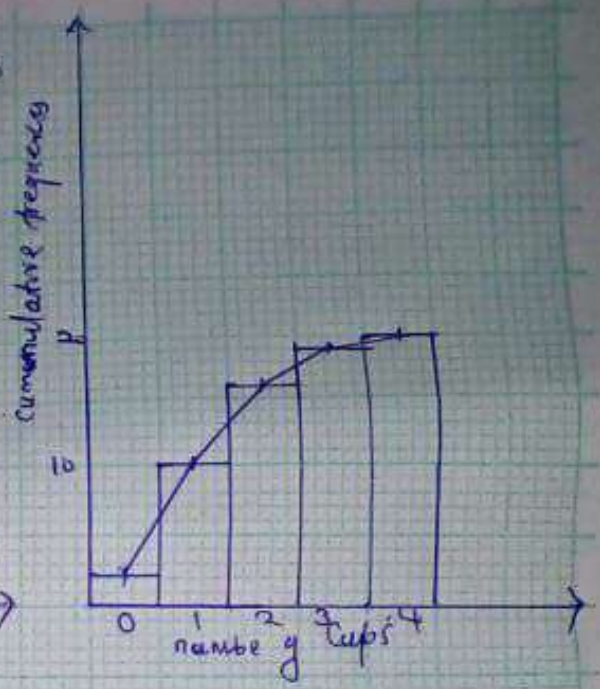
only 19 had purchased 2 or more CDs

$\frac{19}{40} \neq 50\%$

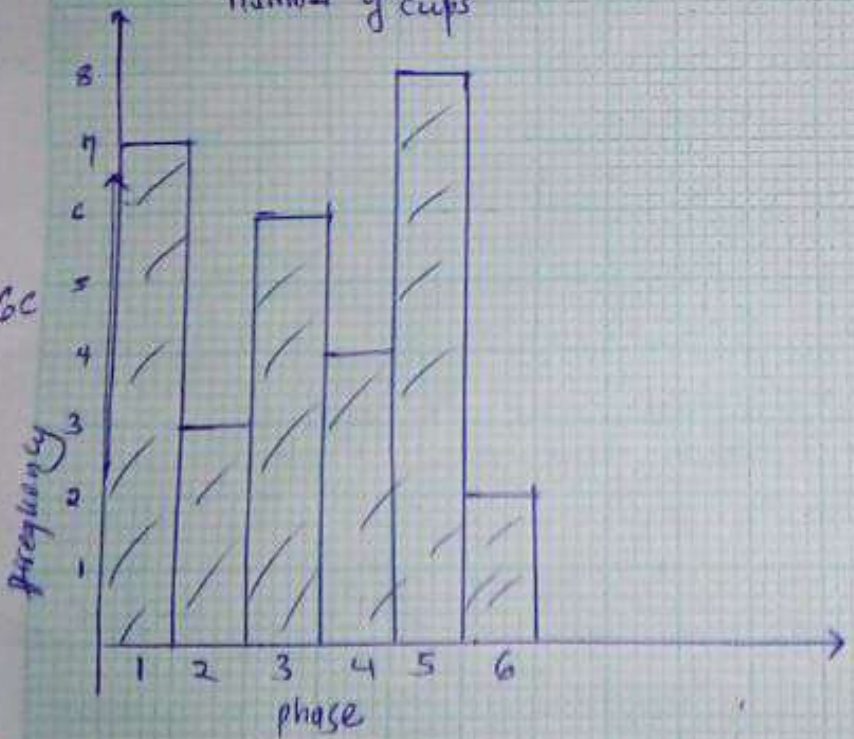
Hence the managers theory is not supported by the new ~~t~~data.


frequency
number of cups

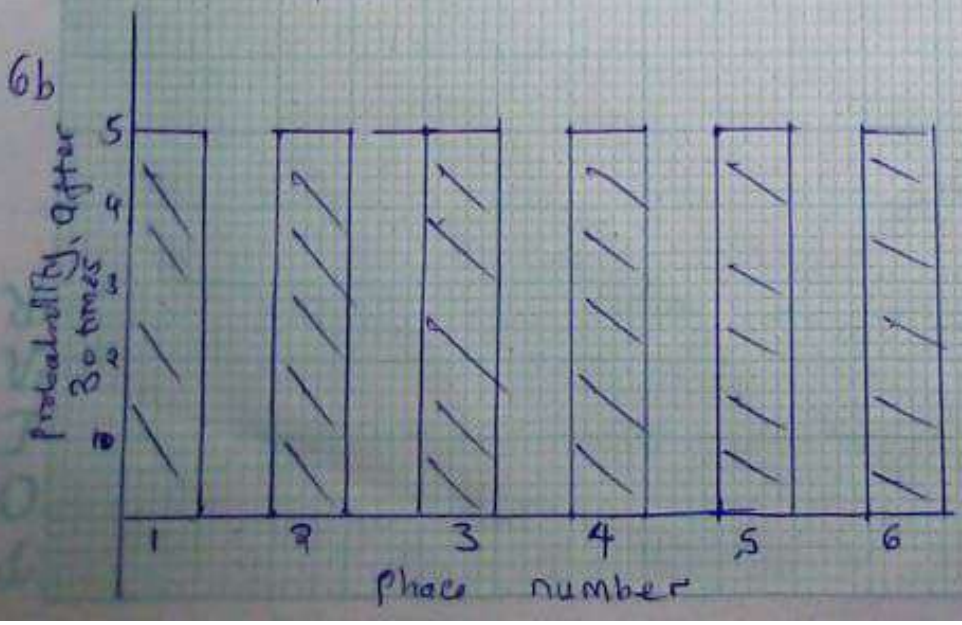
7c


cumulative frequency
number of cups

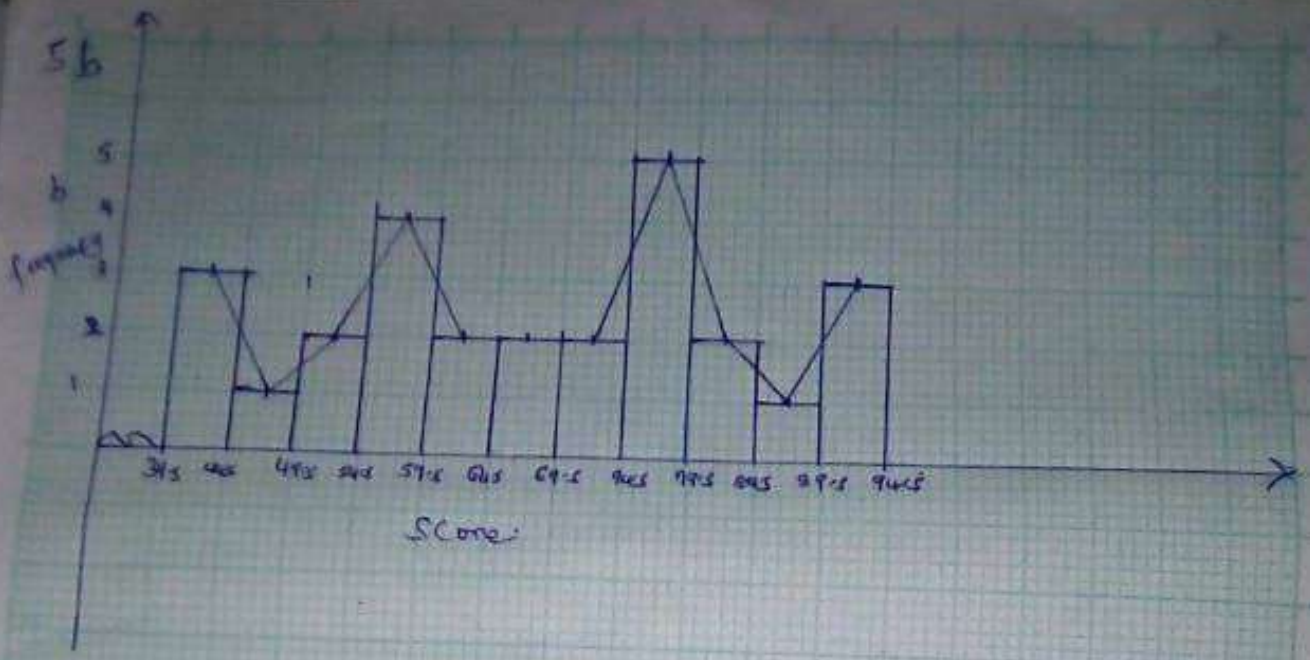
6c


frequency
phase

6b

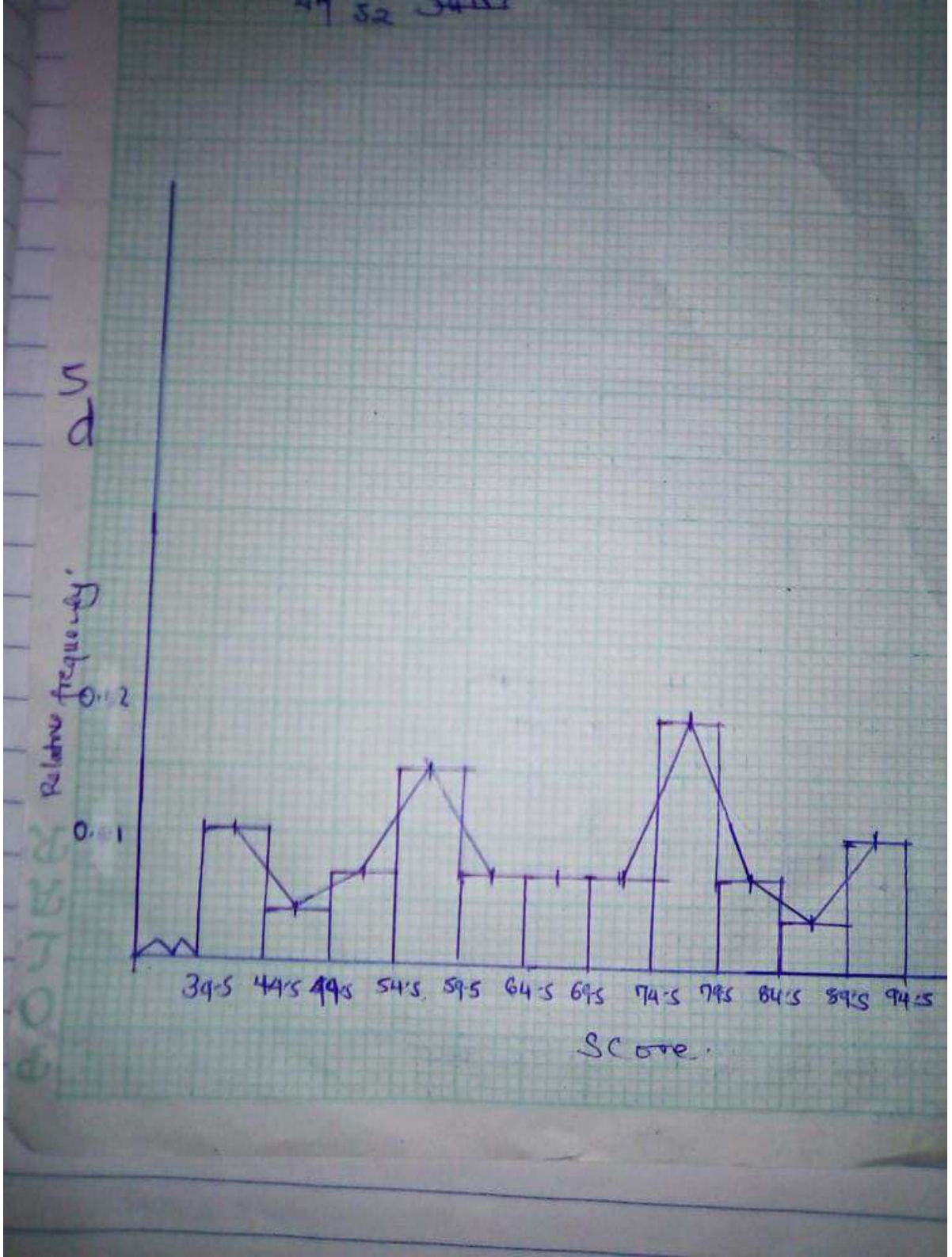

Probability, after 30 times
Phase number

5b


frequency
5
4
3
2
1
39·5
49·5
59·5
69·5
79·5
89·5
94·5
Score

5e


Cumulative frequency
30
20
10
39·5
49·5
59·5
69·5
79·5
89·5
94·5
Score


Relative frequency
0.2
0.1
39.5
44.5
49.5
54.5
59.5
64.5
69.5
74.5
79.5
84.5
89.5
94.5
Score