2.5

1

(a)

Mean:

$2.4+3.5+1.9+3.0+3.5+2.4+1.6+3.8+1.2+2.4+3.1+2.7+1.9+2.2+2.3$

$\frac{38.7}{15} = 2.58$

Median:

Arranging in ascending order

1.2, 1.6, 1.7, 1.9, 2.2, 2.3, 2.4, 2.4, 2.4, 2.7, 3.0, 3.1, 3.5, 3.5, 3.8

2.4

Mode:

= 2.4

(b) Mean

$10+15+14+19+18+17+12+10+14+15+18+20+9+14+11+18$

$= \frac{234}{16}$ 14.625

Median:

9, 10, 10, 11, 12, 14, 14, 14, 15, 15, 17, 18, 18, 18, 19, 20

$\frac{14+15}{2} = \frac{29}{2} = 14.5$

Mode

14 and 18

2 a

11, 6, 2, 13, 8, 4, 5, 17

(b)

1, 3, 2, 4, 5 10 14 9

(c)

19, 14, 17, 15, 14, 22, 27, 22

d 31, 35, 41, 46 46, 57, 62, 74

3

Term 87% → 70%

Final 71% → 30%

$$\frac{71}{100} \times 30 + \frac{87}{100} \times 70$$

$$21.3 + 60.9$$

$$= 82.2\% = 8$$

4

(a) mode

The range is so small and hence similar figures may be posible.

(b) mean as

Getting the average score for all students

c Median
The width is relatively small and hence median is the most appropriate measure.

d mean
Getting the mean mass is most appropriate for the different masses.

5. ENZO $10+8 = 18+3 = 21$
Nadia $8+8 = 16+4 = 20$
Stephan $10+6 = 16+4 = 20$

$= \underline{\text{ENZO}}$

8 (a) Paulo $\frac{4+4+2+5}{4} = \frac{15}{4} = 3.75$

Janet $\frac{3+4+5+5}{4} = \frac{17}{4} = 4.25$

Jamie $\frac{5+4+3+4}{4} = \frac{16}{4} = 4$

(b) Paulo $\frac{3(4)+2(4)+2(2)+1(5)}{3+2+2+1} = \frac{12+8+4+5}{8} = \frac{29}{8}$

$= 3.625$

Janet $\frac{3(3)+2(4)+2(5)+1(5)}{8} = \frac{9+8+10+5}{8} \quad \frac{32}{8}$

$= 4$

Jamie $\frac{3(5)+2(4)+2(3)+1(4)}{8} = \frac{15+8+6+4}{8} \quad \frac{33}{8}$

$4.125$

c Jamie

The weighted mean is ~~very~~ the highest

9

(a) Mean

$10+7+6+8+7+10+5+10+7+9+11+4+6+7+10+10+7+8+10+7+9+7+10+4+7+7+10+11$

$\frac{224}{28} = 8$

mode

7

Median

4, 5, 6, 7, 7, 7, 7, 7,

4, 5 6 6 7 7 7 7 7 7 7 7 7 8 8 9 9 10 10 10 10 10 10 10 10 11 11

$\frac{7+8}{2} = 7.5$

(b) mode

This is the number that is highly bought

c) 10

This number too is highly foequent.

d The shape of the histogram is accounted by the huge demand of certain sizes of shoes

10

(a) $15 \times 6$

$= 90$ goals

(b) Take the players were $x_1$ to $x_{15}$ hence the mean would be calculated as

$$\frac{x_1 + x_2 + x_3 + \dots + x_{15}}{15} = 6$$

$$\therefore x_1 + x_2 + x_3 + \dots + x_{15} = 6 \times 15 = 90$$

11 (a)

| Salary range ($000) | Number (f) | mid point (x) | cum f | fx |
|---|---|---|---|---|
| 20 - 30 | 12 | 25 | 12 | 300 |
| 30 - 40 | 24 | 35 | 36 | 840 |
| 40 - 50 | 32 | 45 | 68 | 1440 |
| 50 - 60 | 19 | 55 | 87 | 1045 |
| 60 - 70 | 9 | 65 | 96 | 585 |
| 70 - 80 | 3 | 75 | 99 | 225 |
| 80 - 90 | 0 | 85 | 99 | 0 |
| 90 - 100 | 1 | 95 | 100 | 95 |
| | | | | 4530 |

$$\frac{\Sigma fx}{\Sigma f} = \frac{4530000}{100}$$

$\$ 45300$

(b) Median

Group of $40,000$ to $50,000$

$= \$45000$

(C) mean

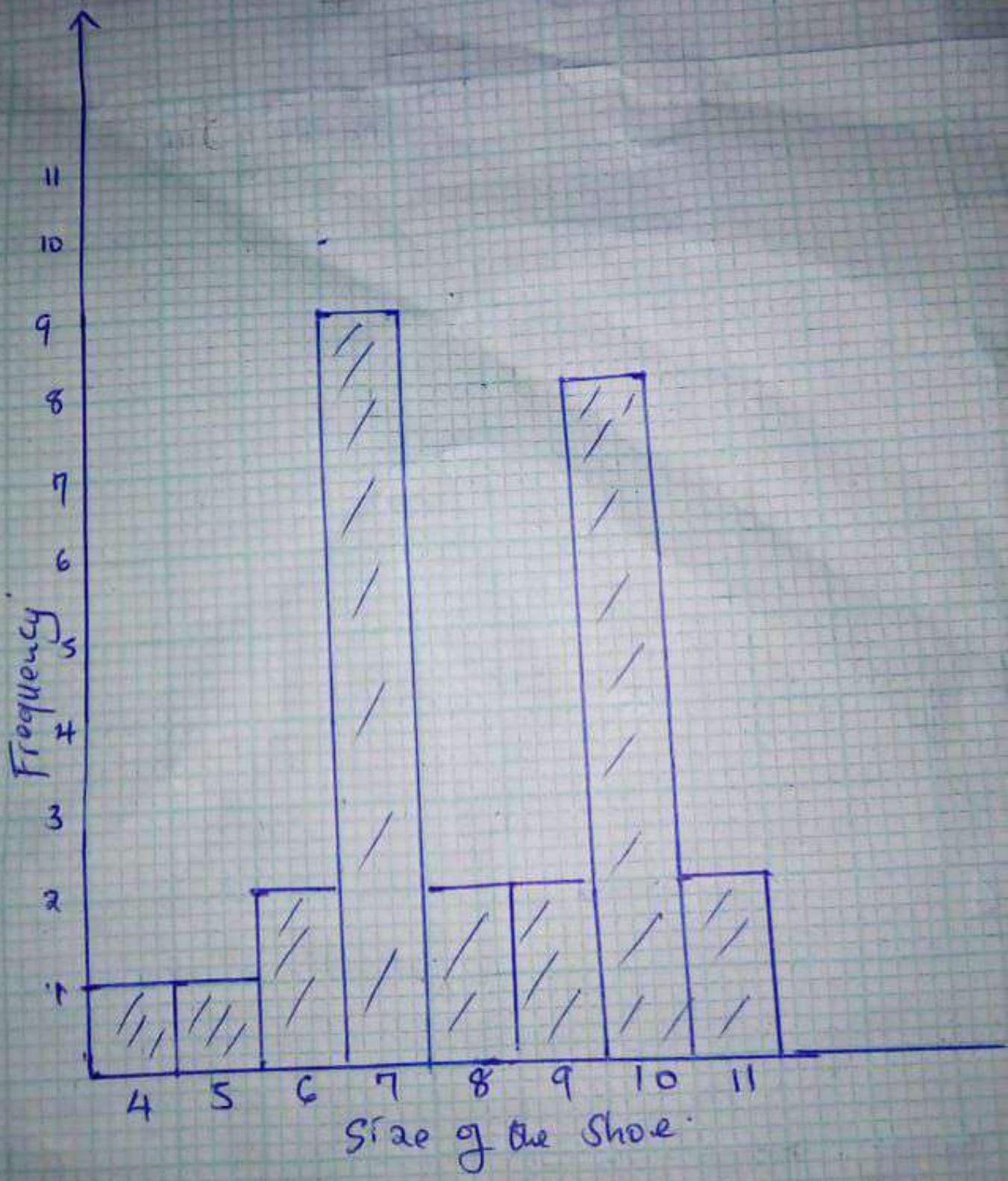
$ 500

Since the Salaries ~~about~~ on the boundary has been placed on the above Interval.

the also,

The median is

Median $50


Frequency
11
10
9
8
7
6
5
4
3
2
1
4
5
6
7
8
9
10
11
Size of the Shoe.