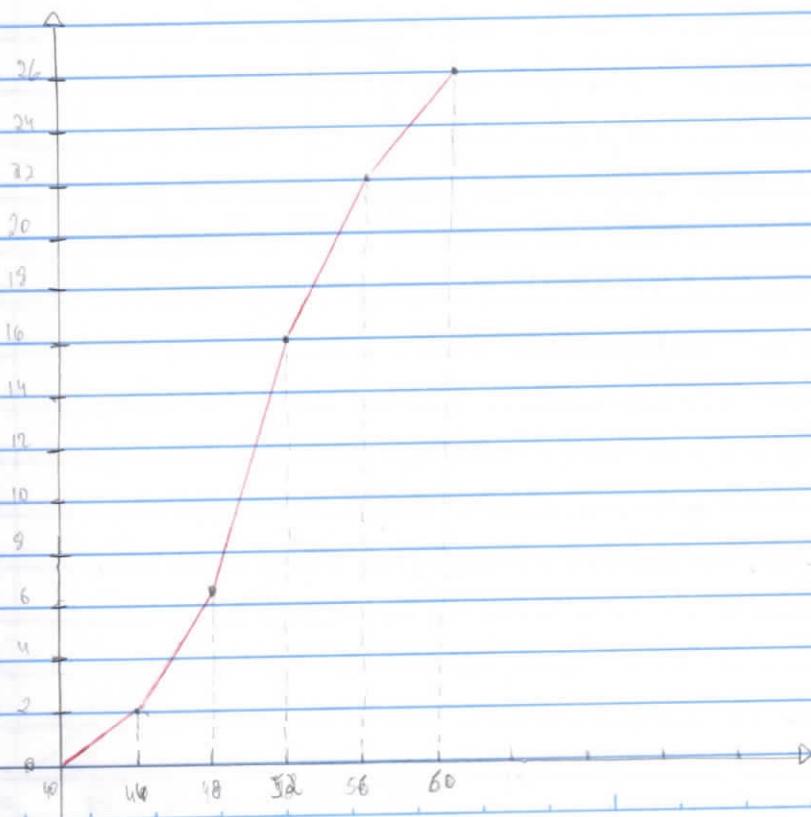
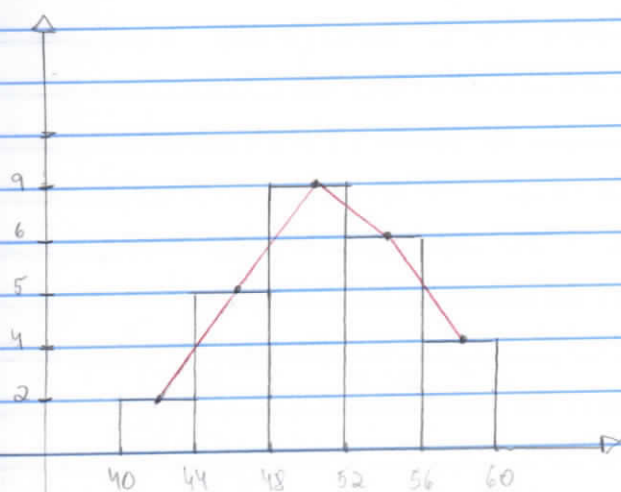


data

S T Q Q S S D

4) I

| i | PESOS (Kg) | f_i | F_{ac} |
|---|------------|---------------|----------|
| 1 | 40 — 44 | 2 | 2 |
| 2 | 44 — 48 | 5 | 7 |
| 3 | 48 — 52 | 9 | 16 |
| 4 | 52 — 56 | 6 | 22 |
| 5 | 56 — 60 | 4 | 26 |
| | | $\Sigma = 26$ | |



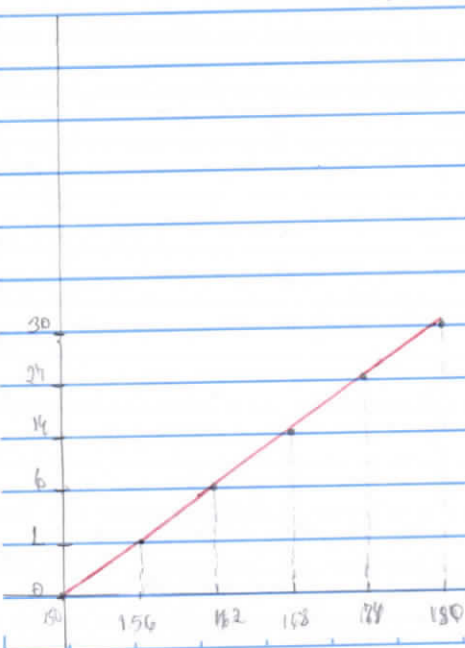
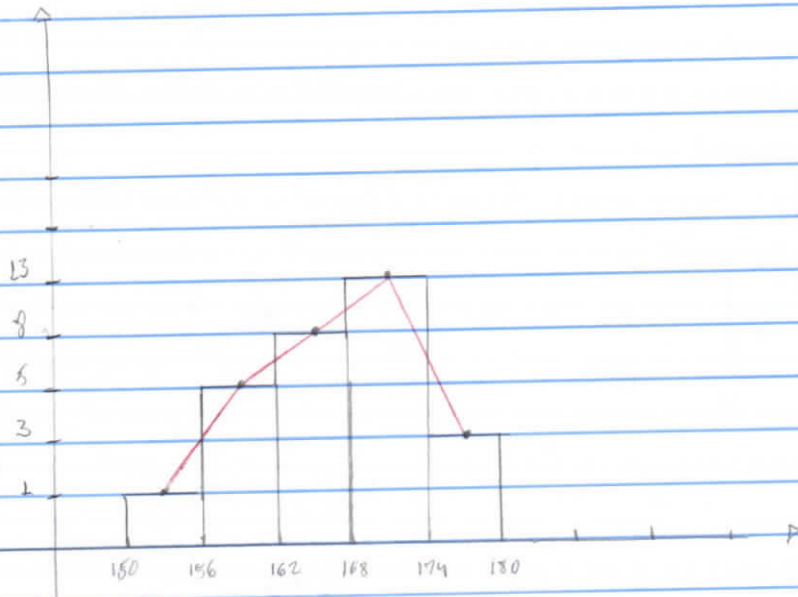
data

S T Q Q S S D

1)

π

| k_i |
|-------|
| 1 |
| 6 |
| 14 |
| 29 |
| 30 |



L)

III

f_i

8

28

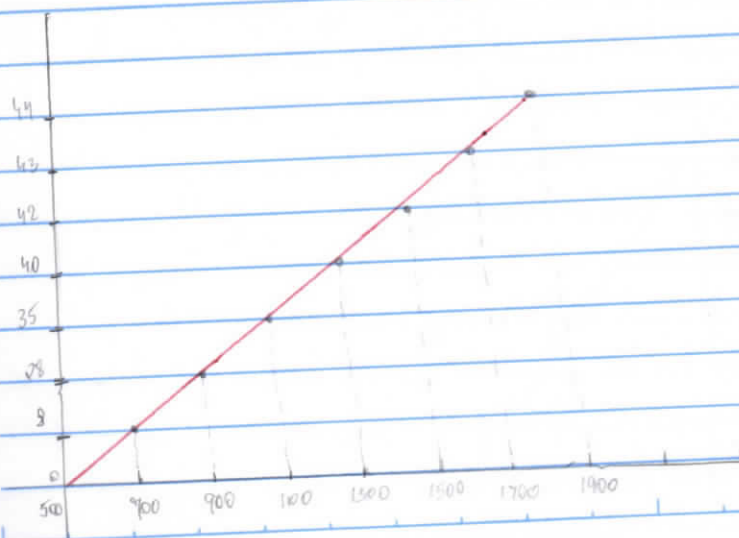
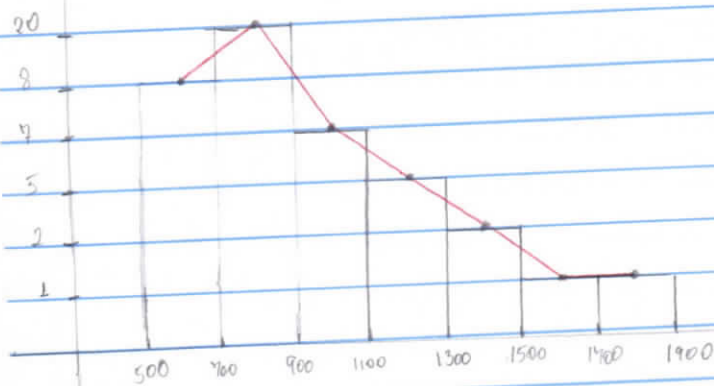
35

40

42

43

44



data

S T Q Q S S D

2)

| CLASSE | x_i | h_i | f_i | h_i | f_i | $x_i \cdot h_i$ | $(x_i - \bar{x})^2 \cdot h_i$ |
|-------------|-------|-------|-------|--------|--------|-----------------|-------------------------------|
| 300 — 400 | 350 | 14 | 14 | 3,50% | 3,50% | 4900 | 1870263,50 |
| 400 — 500 | 450 | 46 | 60 | 11,50% | 15% | 20700 | 3242551,50 |
| 500 — 600 | 550 | 58 | 118 | 14,50% | 29,50% | 31400 | 1588634,50 |
| 600 — 700 | 650 | 76 | 194 | 19% | 48,50% | 49400 | 326059 |
| 700 — 800 | 750 | 68 | 262 | 17% | 65,50% | 51000 | 80937 |
| 800 — 900 | 850 | 62 | 324 | 15,50% | 81% | 52700 | 1121595,50 |
| 900 — 1000 | 950 | 48 | 372 | 12% | 93% | 45600 | 2639532 |
| 1000 — 1100 | 1050 | 22 | 394 | 5,50% | 98,50% | 23100 | 2461585,50 |
| 1100 — 1200 | 1150 | 6 | 400 | 1,50% | 100% | 6900 | 1132741,50 |
| | | 400 | | 100% | | 286200 | 14463900 |

$$\text{MÉDIA} = \frac{286200}{400} = 715,50$$

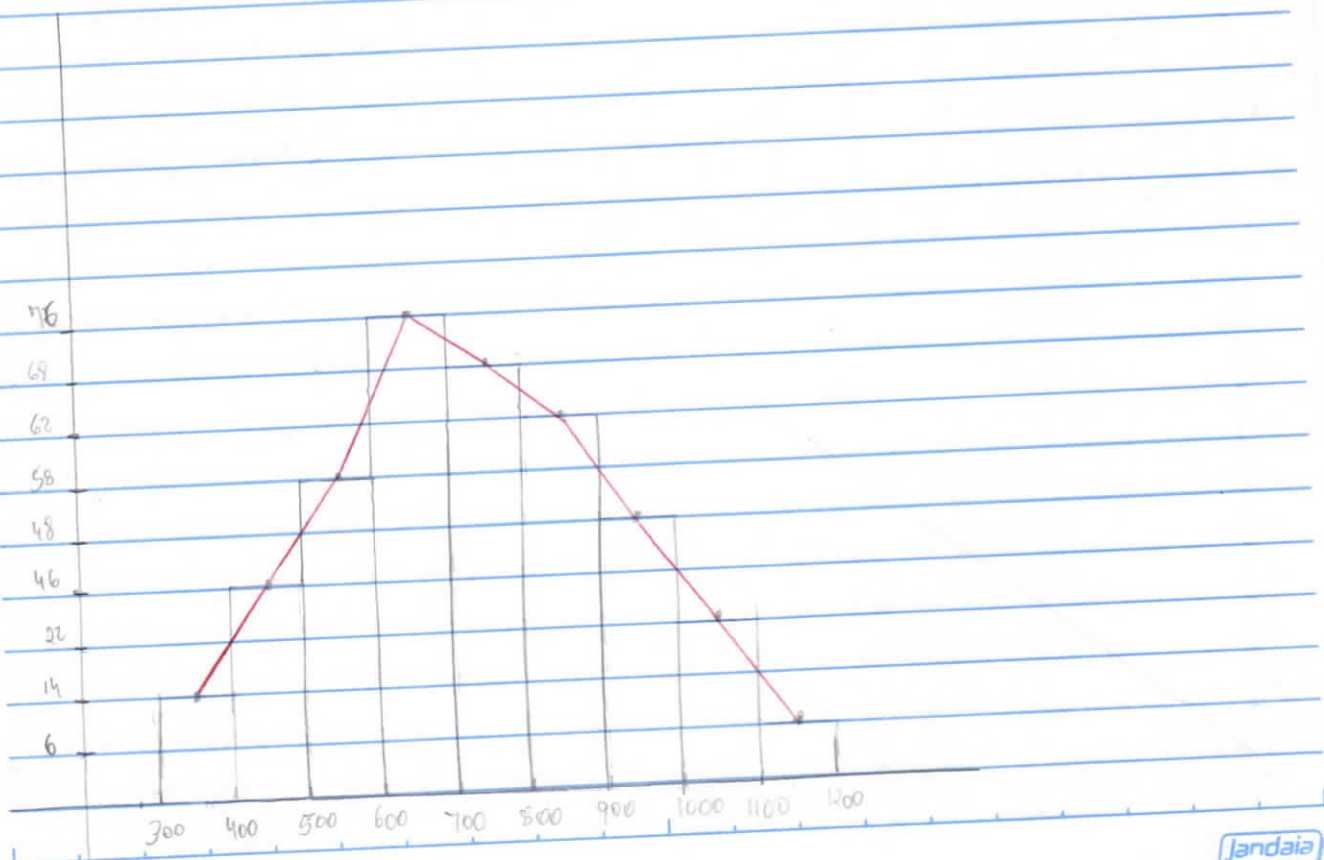
VARIÂNCIA

$$S_x^2 = \frac{14463900}{399} = 36250,38$$

CLASSE MEDIANA = 700 — 800

CLASSE MODAL = 600 — 700

$$\text{DESVIO PADRÃO} = \sqrt{36250,38} = 190,40$$



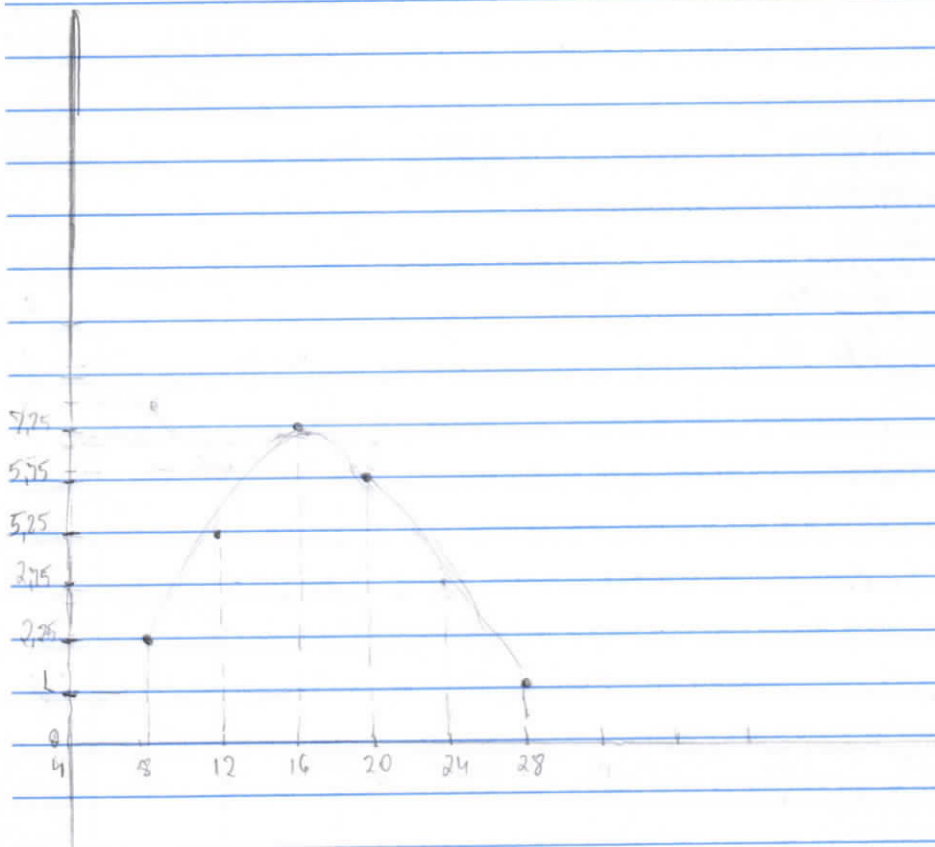
data

S T Q Q S S D

$$\frac{F_{ANT} + 2 \cdot f_c + F_{POST}}{4}$$

3)

| f_i | f_c |
|-------|-------|
| 2 | 2,25 |
| 5 | 5,25 |
| 9 | 7,25 |
| 6 | 5,75 |
| 2 | 2,75 |
| 1 | 1 |



4)

a) $100 \text{ t} - 110$

b) 110

c) 75

d) 14

e) $90 \text{ t} - 90$, $90 \text{ t} - 100$ f) $50 \text{ t} - 60$, $120 \text{ t} - 130$

g) 98

h) 25

5)

a) CURVA EM FORMA DE JOTA

b) CURVA EM FORMA DE SINO

c) CURVA EM FORMA DE U

d) CURVA EM FORMA DE JOTA

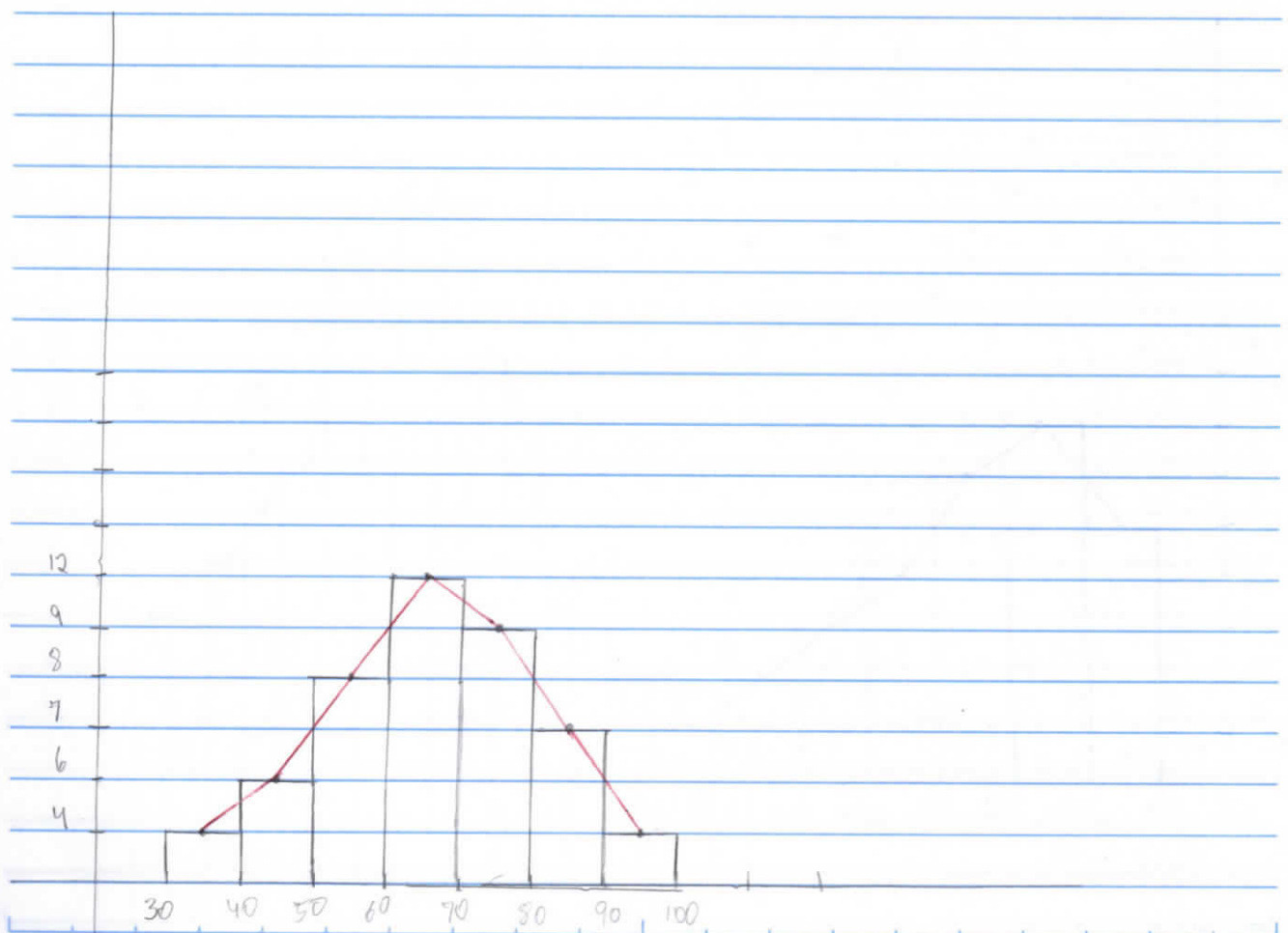
e) CURVA EM FORMA DE U

| 6) | x_i | f_i | F_i | f_i | F_i | $x_i \cdot f_i$ | $(x_i - \bar{x})^2 \cdot f_i$ |
|--------|-------|-------|-------|-------|-------|-----------------|-------------------------------|
| 30-40 | 35 | 4 | 4 | 8% | 8% | 140 | 3145,44 |
| 40-50 | 45 | 6 | 10 | 12% | 20% | 270 | 2546,16 |
| 50-60 | 55 | 8 | 18 | 16% | 36% | 440 | 898,88 |
| 60-70 | 65 | 12 | 30 | 24% | 60% | 780 | 4,32 |
| 70-80 | 75 | 9 | 39 | 18% | 78% | 675 | 195,24 |
| 80-90 | 85 | 7 | 46 | 14% | 92% | 595 | 2634,52 |
| 90-100 | 95 | 4 | 50 | 8% | 100% | 380 | 3454,44 |
| | | 50 | | 100% | | 3280 | 14082,00 |

$$\text{MÉDIA} = \frac{3280}{50} = 65,60$$

$$\text{VARIÂNCIA} = \frac{14082}{49} = 287,39$$

$$\text{DESVIO PADRÃO} = \sqrt{287,39} = 16,95$$



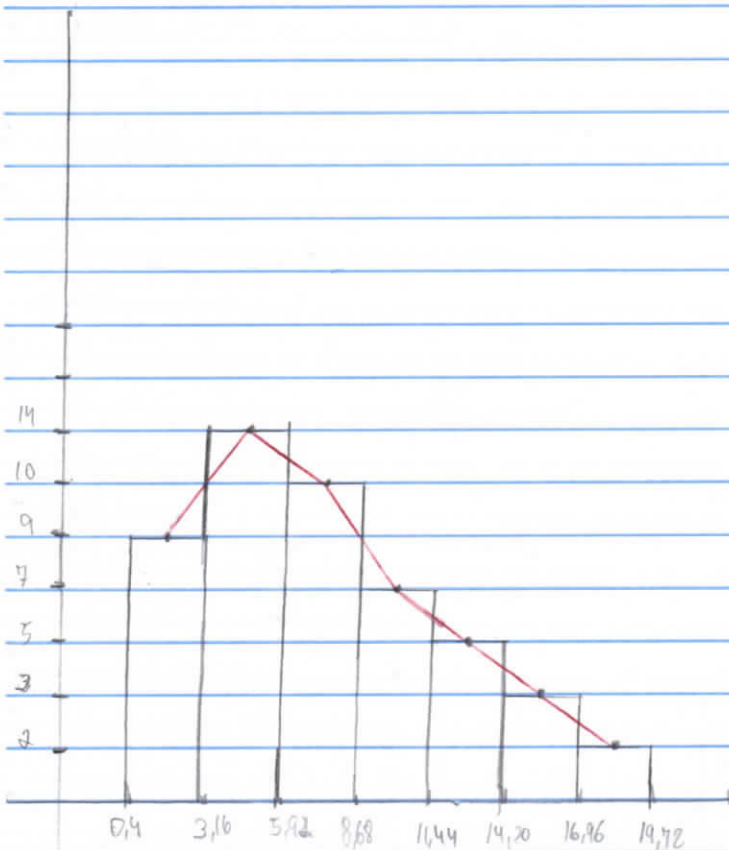
7)

$$K = 1 + 3,33 \cdot \log 50 = 6,66$$

$$AT = 18,8 - 0,4 = 18,4$$

$$AC = 18,4 / 6,66 = 2,76$$

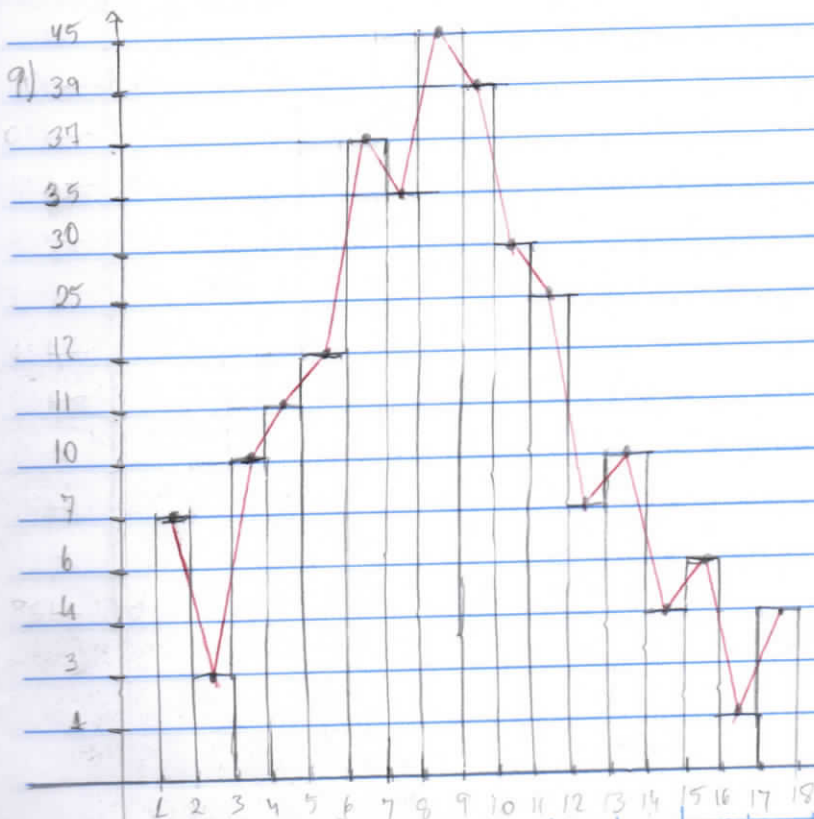
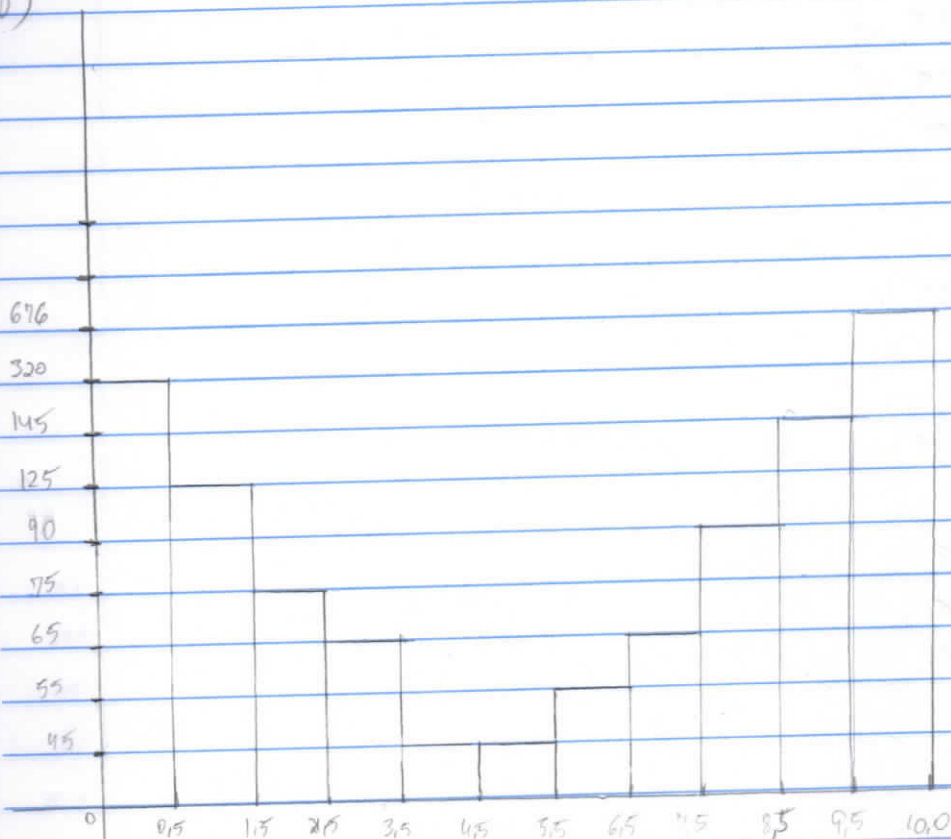
| CLASSES | x_n | f_i | F_n | f_r | F_r | $x_n \cdot f_i$ |
|---------------|-------|-------|-------|-------|-------|-----------------|
| 0,4 — 3,16 | 1,78 | 9 | 9 | 18 % | 18 % | 16,02 |
| 3,16 — 5,92 | 4,54 | 14 | 23 | 28 % | 46 % | 63,56 |
| 5,92 — 8,68 | 7,30 | 10 | 33 | 20 % | 66 % | 73 |
| 8,68 — 11,44 | 10,06 | 7 | 40 | 14 % | 80 % | 70,42 |
| 11,44 — 14,20 | 12,82 | 5 | 45 | 10 % | 90 % | 64,10 |
| 14,20 — 16,96 | 15,58 | 3 | 48 | 6 % | 96 % | 46,74 |
| 16,96 — 19,72 | 18,34 | 2 | 50 | 4 % | 100 % | 36,68 |
| | | | 100 | | | |



data

S T Q Q S S D

8)



9)

| c) classes | f_c | f_c |
|------------|-------|---------|
| 1-2 | 7 | 4,25 ✓ |
| 2-3 | 3 | 5,75 ✓ |
| 3-4 | 10 | 8,50 ✓ |
| 4-5 | 11 | 11 ✓ |
| 5-6 | 12 | 18 ✓ |
| 6-7 | 37 | 30,25 ✓ |
| 7-8 | 35 | 38 |
| 8-9 | 45 | 41 ✓ |
| 9-10 | 39 | 38,25 |
| 10-11 | 30 | 31 ✓ |
| 11-12 | 25 | 21,75 ✓ |
| 12-13 | 7 | 12,25 ✓ |
| 13-14 | 10 | 7,75 ✓ |
| 14-15 | 4 | 6 ✓ |
| 15-16 | 6 | 4,25 ✓ |
| 16-17 | 2 | 3 ✓ |
| 17-18 | 4 | 2,25 ✓ |

data

S T Q Q S S D

9)

41

39,75

38

31

30,75

21,8

18

12,75

11

8,50

7,75

6

5,75

4,75

3

2,75

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18