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# ASSIGNMENT.02

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بسم الله الرحمن الرحيم

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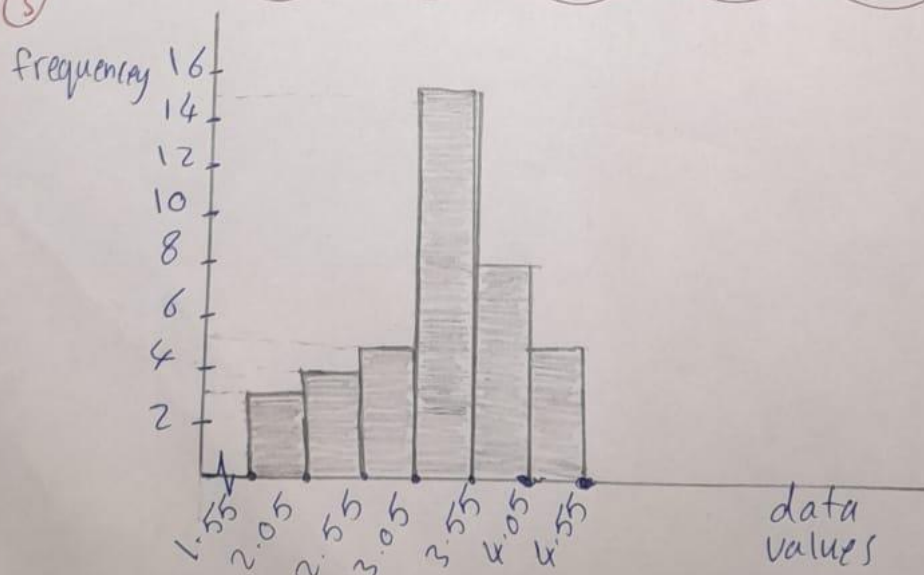
Part(a) :

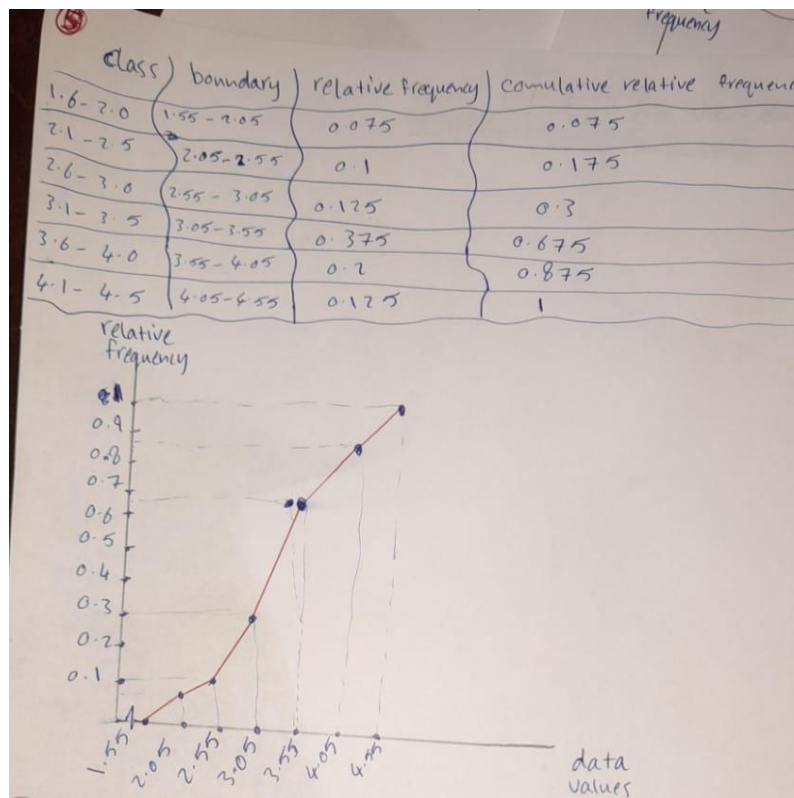
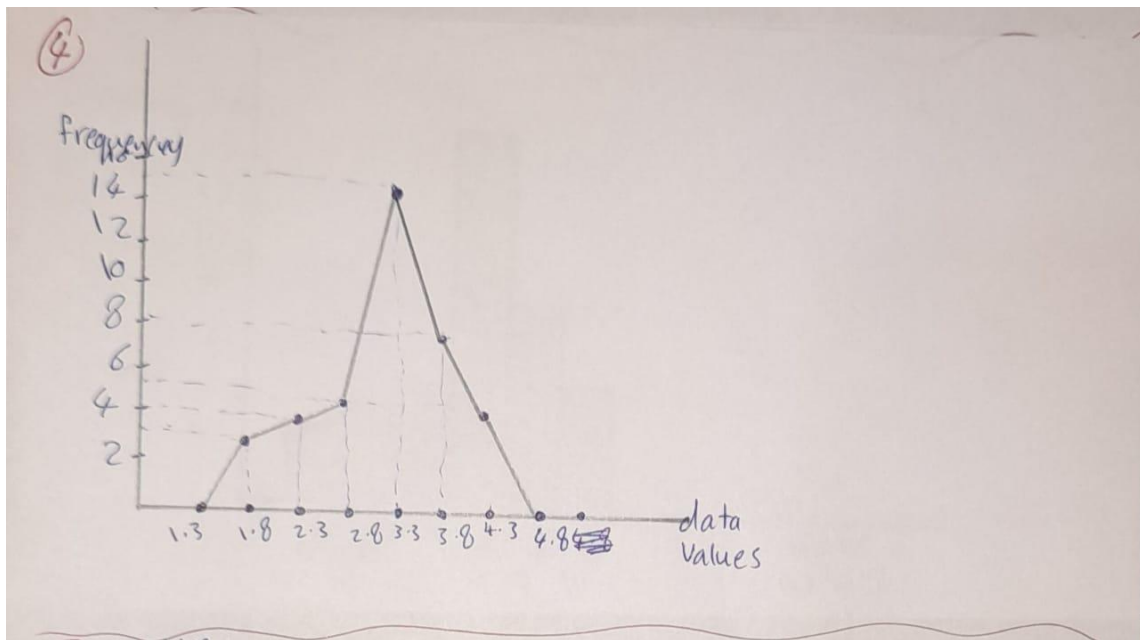
① class width =  $\frac{\text{max} - \text{min}}{\text{class}} = \frac{4.4 - 1.6}{8}$   
②  $= \frac{2.8}{8} = 0.46 \approx 0.5$

Class	frequency	boundary	midpoint	relative frequency
1.6 - 2.0	3	1.55 - 2.05	1.8	0.075
2.1 - 2.5	4	2.05 - 2.55	2.3	0.1
2.6 - 3.0	5	2.55 - 3.05	2.8	0.125
3.1 - 3.5	15	3.05 - 3.55	3.3	0.375
3.6 - 4.0	8	3.55 - 4.05	3.8	0.2
4.1 - 4.5	5	4.05 - 4.55	4.3	0.125

boundary =  $\frac{2.1 - 2.0}{2} = \frac{0.1}{2} = 0.05$

③





Part(b)

⑥  $\Rightarrow \text{mean} = \frac{\sum x}{N} = \frac{124.3}{40} = 3.23$

$\Rightarrow \text{median} \Rightarrow \text{even}$

نقوم بترتيب القيم الصاعدة

1.6	1.9	2.0	2.2	2.3	2.4	2.5	2.6
2.6	2.9	3.0	3.0	3.1	3.1	3.1	3.1
3.2	3.2	3.2	3.3	3.3	3.3	3.4	3.4
3.4	3.5	3.5	3.6	3.7	3.7	3.7	3.8
3.8	3.9	3.9	4.1	4.1	4.2	4.3	4.4

$$\frac{x_{\frac{n}{2}} + x_{\frac{n}{2}+1}}{2} = \frac{x_{20} + x_{21}}{2} = \frac{3.3 + 3.3}{2} = 3.3$$

$\Rightarrow \text{mode} \Rightarrow \boxed{3.1}$   
~~3.1 3.5~~

②

$$\text{mean} = 3.23$$

$$\text{frequency mean} = \frac{40}{8} = 5.0$$

$$\text{frequency mean} > \text{mean}$$