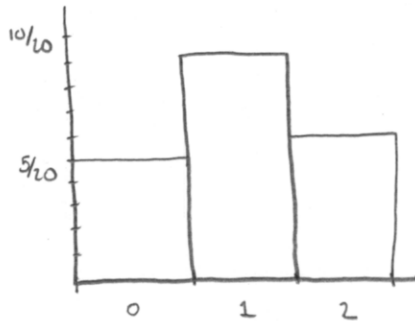


§1.5 RELATIVE FREQUENCY HISTOGRAMS

1.19 (a)

CLASS	FREQUENCY	RELATIVE FREQUENCY
0	5	$\frac{5}{20}$
1	9	$\frac{9}{20}$
2	6	$\frac{6}{20}$



(b) GREATER THAN 1: JUST CLASS 2 → $\frac{6}{20} = \frac{3}{10} = 30\%$

(c) LESS THAN 2: CLASS 0 & 1 → $\frac{14}{20} = \frac{7}{10} = 70\%$

(d) 6 out of 20 → $\frac{6}{20} = \frac{3}{10} = 30\%$

(e) UNIMODAL, FAIRLY SYMMETRIC, NO OUTLIERS.

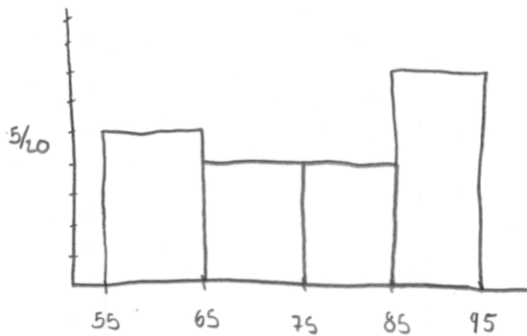
1.24

(a) RANGE = $94 - 55 = 39$

I CHOOSE TO USE 4 CLASSES WITH WIDTH

$$\frac{39}{4} \approx 10 \text{ (ROUNDED UP)}$$

CLASS	FREQ.	REL. FREQ.
[55, 65)	5	$\frac{5}{20}$
[65, 75)	4	$\frac{4}{20}$
[75, 85)	4	$\frac{4}{20}$
[85, 95)	7	$\frac{7}{20}$



(b) THE SCORES ARE FAIRLY EVENLY DISTRIBUTED BETWEEN 55 AND 94, BUT THE DISTRIBUTION IS BIMODAL WITH CLUSTERS OF SCORES AT THE LOW-END (55-65) AND AT THE HIGH-END (85-94).

(c) BIMODAL. IDK... MAYBE THE STUDENTS HAVE A WIDE VARIETY OF BACKGROUNDS & LEVELS OF PREPAREDNESS.

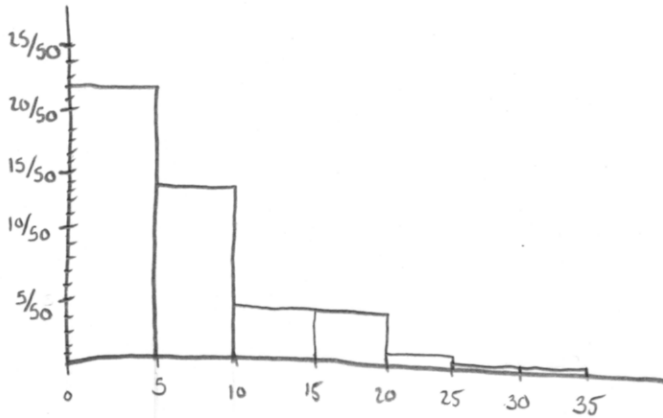
1.26

(a) RANGE = $32.3 - 0.2 = 32.1$

I CHOOSE 7 CLASSES WITH CLASS WIDTH

$$\frac{32.1}{7} \approx 5 \text{ (ROUND UP)}$$

CLASS	TALLY	FREQ.	REL. FREQ.
[0, 5)		22	$\frac{22}{50}$
[5, 10)		14	$\frac{14}{50}$
[10, 15)		5	$\frac{5}{50}$
[15, 20)		5	$\frac{5}{50}$
[20, 25)		2	$\frac{2}{50}$
[25, 30)		1	$\frac{1}{50}$
[30, 35)		1	$\frac{1}{50}$



(b) SKewed RIGHT

(c) CLASS 1 + CLASS 2 : $\frac{22}{50} + \frac{14}{50} = \frac{36}{50} = \frac{18}{25}$

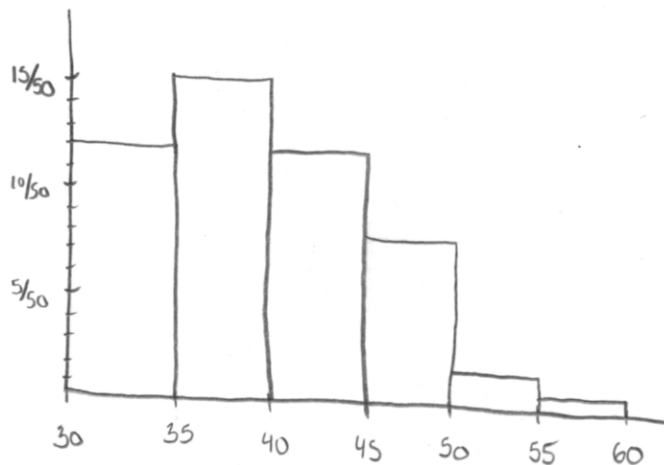
1.28

(a)

STEM	LEAF
3	8 2 5 4 9 0 4 3 7 5 0 2 9 9 2 3 6 5 8 6 0 1 6 6 6 7 1
4	7 2 0 1 3 1 6 0 5 5 8 1 0 2 3 1 6 8 6 0
5	5 0 0

(b)

CLASS	TALLY	FREQ.	REL. FREQ.
[30, 35)		12	12/50
[35, 40)		15	15/50
[40, 45)		12	12/50
[45, 50)		8	8/50
[50, 55)		2	2/50
[55, 60)		1	1/50



(c) THE HISTOGRAM IS MORE PRECISE (MORE CLASSES, SMALLER WIDTHS)

$$(d) \frac{15}{50} + \frac{12}{50} = \boxed{\frac{27}{50}}$$

$$(e) \frac{12}{50} + \frac{15}{50} + \frac{12}{50} + \frac{8}{50} = \boxed{\frac{47}{50}}$$