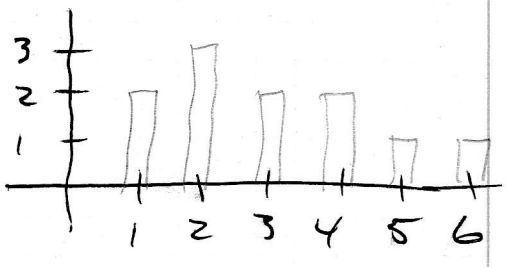
[1] DATA: 1, 1, 2, 2, 2, 3, 3, 4, 4, 5, 6 $n=11$

CLASS	FREQ
1	2
2	3
3	2
4	2
5	1
6	1



[2] MEAN $(\bar{x}) = \frac{33}{11} = \boxed{3}$ (b)

[3] MEDIAN [3] (b)

[4] MODE (FROM GRAPH) [2] (d)

[5] STD. DEV. $= \sqrt{VAR} = \boxed{1.61}$ (d)

[6] VARIANCE: $\frac{26}{11-1} = \boxed{2.6}$ (b)

X	$\bar{X}$	$X-\bar{X}$	$(X-\bar{X})^2$
1	3	-2	4
1	3	-2	4
2	3	-1	1
2	3	-1	1
2	3	-1	1
3	3	0	0
3	3	0	0
4	3	1	1
4	3	1	1
5	3	2	4
6	3	3	9
			26

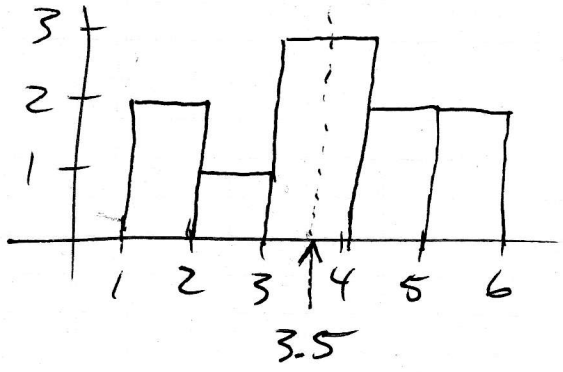
[7] SKEWNESS $= \frac{(\text{MEAN}-\text{MODE})}{\text{STD. DEV.}} = \frac{(3-2)}{1.61} = \boxed{0.62}$ (b)

[8] (d)

[9] (c)

10 DATA: 1.3, 1.9, 2.1, 3.1, 3.8, 3.8, 4.4, 4.5, 5.1, 5.3 $n = 10$

CLASS	FREQ
1-2	2
2-3	1
3-4	3
4-5	2
5-6	2



11 MEAN 3.53 (d)

12 MEDIAN $\frac{(3.8+3.8)}{2} = 3.8$ (b)

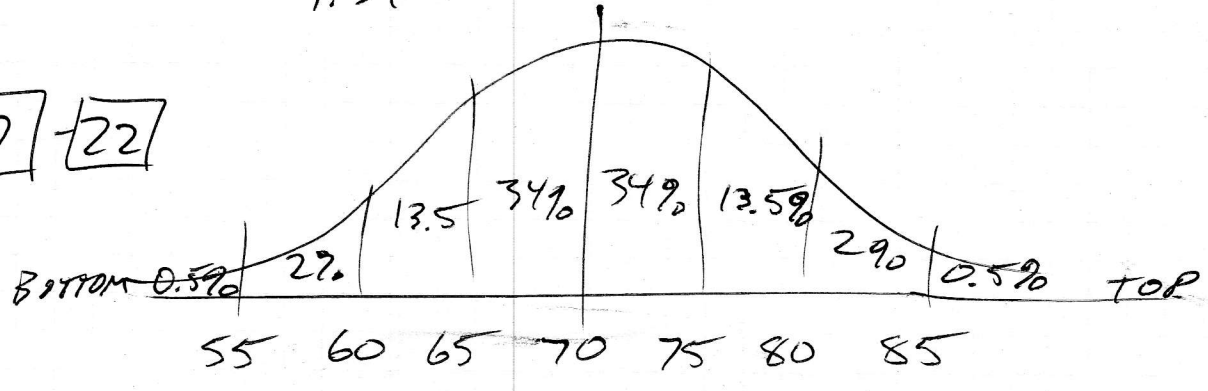
13 MODE MIDDLE OF 3-4 RANGE = 3.5 (a)

14 STD. DEV. = 1.39 (d)

15 VAR. = (STD. DEV.)^2 = 1.92 (c)

16 SK = $\frac{(3.53-3.5)}{1.39}$ = 0.022 (c)

17 - 22



17. >80 SCORE? 2.5% (b)

18. 97.5th PERCENTILE (d)

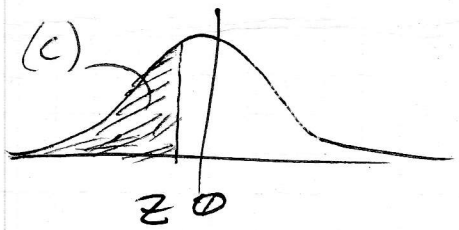
19. 75 (d)

20. 70 (b)

21 97.5% (d)

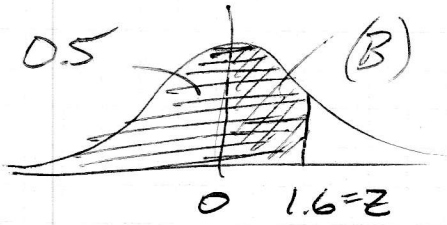
22 95% (b)

23. $Z = -0.4$
LEFT OF
AREA = ?



(C) = **0.345** (34.5%) (C) (ANSWER)

24 $Z = 1.6$
LEFT OF...

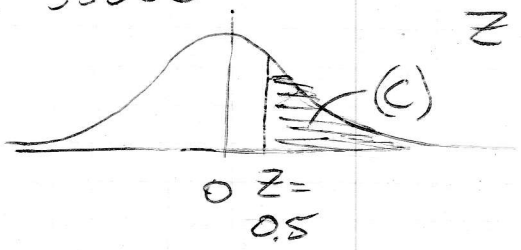


(B) 0.445
+ HALF 0.5
0.945
(d) (ANSWER)

25 $\mu = 50000$
$\sigma = 10{,}000$
$x = 55000$

$$\Rightarrow \quad Z = \frac{(x-\mu)}{\sigma} = \frac{(55000-50000)}{10000}$$

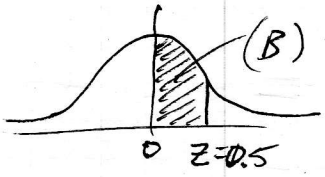
$$Z = 0.5$$



(C) **0.309**
(30.9%)
(b) (ANSWER)

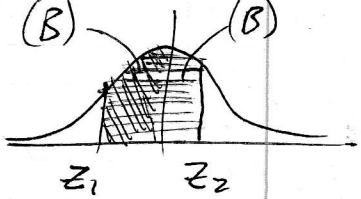
26 POP. = 1.5 MILLION
FROM #25, FRACTION ABOVE 55000 IS 0.309
(0.309) * (1.5 MILLION) = **0.46 MILLION** (C) (ANSWER)

27. $x = 55000$
$Z = 0.5$



(B) = 0.192 = **19.2%** (d) (ANSWER)

28. BETWEEN $X_1 = 35000$ $Z_1 = \frac{(35000-50000)}{10000} = -1.5$



AND $X_2 = 55000$ $Z_2 = 0.5$

Z_1 (B) = 0.433
+ Z_2 (B) = + 0.192
ANSWER (d)
0.625 = 62.5%