

3.1

1)

$$\bar{x} = \frac{388}{8} = 48.5 \text{ visitors}$$

$$\text{Median} = \frac{43+50}{2} = \frac{93}{2} = 46.5 \text{ visitors}$$

$$\text{mode} = 41 \text{ \& } 62 \text{ visitors}$$

X	X ²
36	1296
41	1681
41	1681
43	1849
50	2500
53	2809
62	3844
62	3844
TOTAL	388 19504

2) Right skew

3.2

$$3) s = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}} = \sqrt{\frac{19504 - \frac{(388)^2}{8}}{7}} = \sqrt{\frac{686}{7}} = \sqrt{98}$$

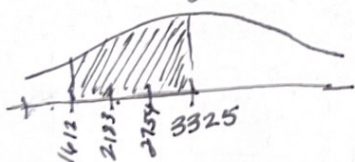
$$s = 9.899494937$$

Standard deviation: $s = 9.9$ visitors

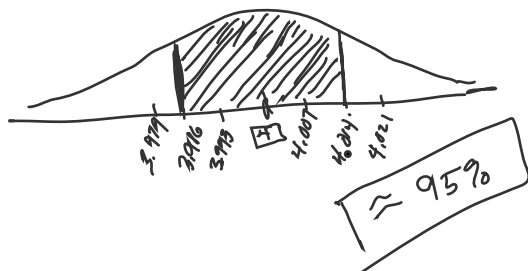
Variance: $s^2 = 98$ visitors²

Range $62 - 36 = 26$ visitors

$$4) \mu = 3325g \quad \sigma = 571g \quad x_1 = 1612 \quad x_2 = 3325$$



$$\frac{99.7}{2} = 49.85\%$$



3.3

b)

midpt x_i	frequency f	Σf	$\Sigma x_i f_i$
8.5	1	8.5	72.25
13.5	2	27	364.5
18.5	3	55.5	1026.75
23.5	5	117.5	2761.25
28.5	4	114	3249
33.5	3	100.5	3366.75
38.5	2	77	2964.5
Total	20	500	13805

$$\text{mean } \bar{x} = \frac{\Sigma x_i f_i}{\Sigma f_i}$$

$$\bar{x} = \frac{500}{20} = \boxed{25 \text{ miles}}$$

$$s = \sqrt{\frac{\Sigma x_i^2 f_i - (\Sigma x_i f_i)^2}{\Sigma f_i - 1}}$$

$$s = \sqrt{\frac{13805 - \frac{500^2}{20}}{19}} = \sqrt{\frac{1305}{19}} = \sqrt{68.6842...} \approx 8.287593772$$

Standard deviation $s = 8.3 \text{ miles}$

7)

Credits w	Grade x	wx
15	4 (A)	60
21	3 (B)	63
15	2 (C)	30
9	1 (D)	9
TOTALS	60	162

$$162/60 = 2.7$$

GPA 2.7

3.4

8) The person's height is 1.7 standard deviations above the mean.

9) 68% of the test takers earned 75 pts or less on the test.

35. 2, 6, 6, 7, 7, 8, 8, 8, 8, 9, 9, 9, 10, 10, 11, 12, 12, 12, 15

10) a)
$$\begin{array}{cccccc} \min & Q_1 & Q_2 & Q_3 & \text{Median} \\ 1 & 7.5 & 8.5 & 10.5 & 15 \end{array}$$

b)
$$IQR = 10.5 - 7.5 = 3$$

Outlier: 2

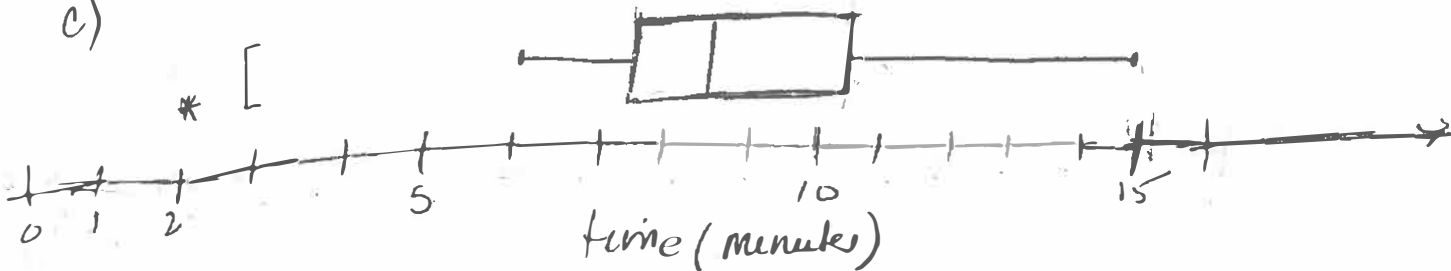
$$LF: 7.5 - 1.5(3) = 3$$

$$UF: 10.5 + 1.5(3) = 15$$

Time to Complete Anthropometric Test

c)

*



d) right skewed