

- ① a) $20 - 4 = 16$ ② a) 14
 b) 15 b) 23.91
 c) $18 - 12 = 6$ c) 4.90

③ $M = 125$ $Q_1 = 99$ $IQR = 50$

a) $Q_3 = 99 + 50 = 149$

b) $99 - 1.5(50) = 24$
 $149 + 1.5(50) = 224$

Outlier
 $X < 24$ or $X > 224$

④ $(70)(5) + (10)(7) = 350 + 70 = \frac{420}{12} = 35 \text{ cm/month}$

⑤ $\frac{(24)(4) + (16)(3.3)}{24 + 16} = 3.72$

⑥ $(1.3)(3) + (1.2)(5) + (1.5)(7) = 5.4 \text{ notebooks}$

⑦ $\frac{(3)(2) + (14)(1) + (6)(2) + (1)(3)}{3 + 14 + 6 + 1} = 1.21 \text{ Computers/Classroom}$

⑧ $(1.6)(82) + (1.2)(95) + .2X = 86$

$\frac{.2X = 17.8}{.2} = \frac{17.8}{.2}$

$X = 89$ needed on classwork

⑨ a) $\frac{\sum_{i=1}^8 g_i}{8}$

b) $\frac{145}{8} = 18.125$

c) $12 + 27 + 16 + 20 = 75$

⑩ a) $(10 + 24 + 14 + 12) - (27 + 16 + 20 + 22)$
 $60 - 85 = -25$

⑪ a) $\frac{\sum_{i=1}^8 n_i p_i}{\sum_{i=1}^8 n_i}$

b) $\frac{8450}{1500} = 5.63$

Ch. 1 Review

16) mean

17) a) Felix b) 1, 5, 5, 10 → mean = 5.25
mode = 5

18) True

19) C

20) B

21) C

22) $50(26.4) = 1320$
 $49(26) = 1274$

$4L = 50^{th} \text{ Score}$

23) a) min = 48 $Q_1 = 55.5$ MED = 61.5 $Q_3 = 80$ Max = 94

b) IQR = $80 - 55.5 = 24.5$

$55.5 - 1.5(24.5) = 18.75$ (none below)

$80 + 1.5(24.5) = 116.75$ (none above)

No outliers

24) Standard deviation of 3.2 in first class shows larger variability in height.

26) $80 - 50 = 30$ $50 - 1.5(30) = 5$

$80 + 1.5(30) = 125$

27) a) mean: \$188.40 median: \$151.50 $S_x: \$138.16$

b) IQR: $231 - 95 = 136$

$95 - 1.5(136) = -109$

$231 + 1.5(136) = 435$

Outliers: 440, 445, 500

c) mean: \$146.19 median: \$140 $S_x: \$77.83$

28) The total in each of the following categories in 2004: Age, Gender, Education completed.

29) Year, voting age population, percent reporting they voted, age, gender, education

30) 28.4% of 18 to 20 year olds reported they voted in 2000.

31) $(.601)(111.9) = 67.25 \text{ million}$

32) $(.575)(65.3) = 37.55 \text{ million}$

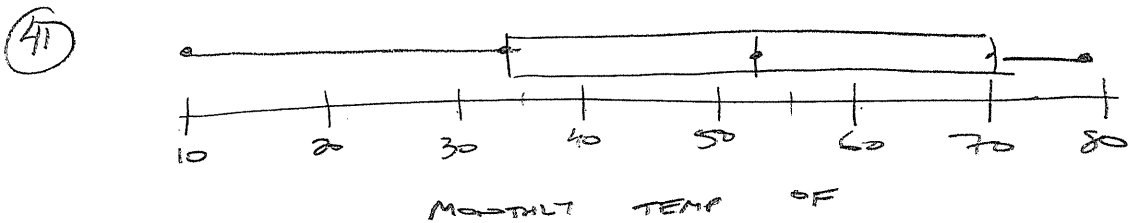
33) 65 and over

34) SD for Juneau: 11.53
 SD for Minneapolis: 22.14 \rightarrow higher SD so greater variability

35) All statistics are similar, as well as the data displays. There is little to no difference in the running times of males and females.

39) a) 42 b) False c) $15/42 = 35.7\%$

40) a) 83 b) 91 c) 50% d) 49 - 62 e) $Q_1 \text{ and } Q_2$



44) a)

Score	Freq.	Rel. Freq.	Cum. Freq.
1	1	$1/20 = 0.05$	1
2	0	0	1
3	2	0.1	3
4	1	0.05	4
5	3	0.15	7
6	3	0.15	10
7	5	0.25	15
8	4	0.20	19
9	0	0	19
10	1	0.05	20
Total			20

