Unit 2a HW2

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(1) a) $24 \leq t < 26$

b) $\dfrac{21.2 + 23.5 + 25.8 + \ldots}{25} = 25.88$ (mid-interval)

(3) a) 40-50

b) $\dfrac{15(3) + 25(3) + 35(1) + 45(6) + 55(5) + 65(3) + 75(2) + 85(2) + 95(1)}{25}$

$= 51.8$

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(1) a) 50

b) $14 - 6 = a$

$a = 8$

$24 + b = c$

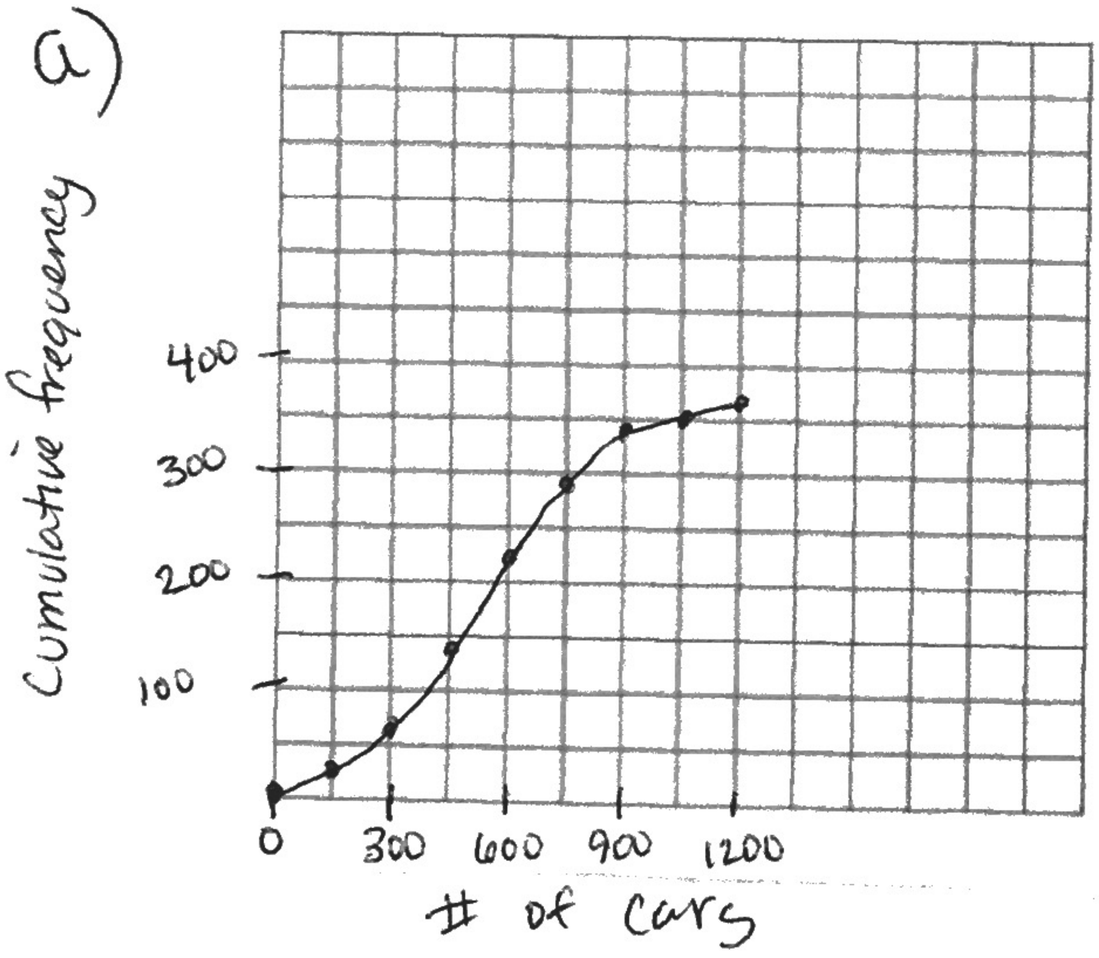
$c + 5 = 43$

$c = 38$

$24 + b = 38$

$b = 14$

(3) a)



b) median ≈ 525

IQR = 690 - 370 = 320

c) 365 - 310 = 55

$\dfrac{55}{365} = .151 \times 100 = 15.1\%$

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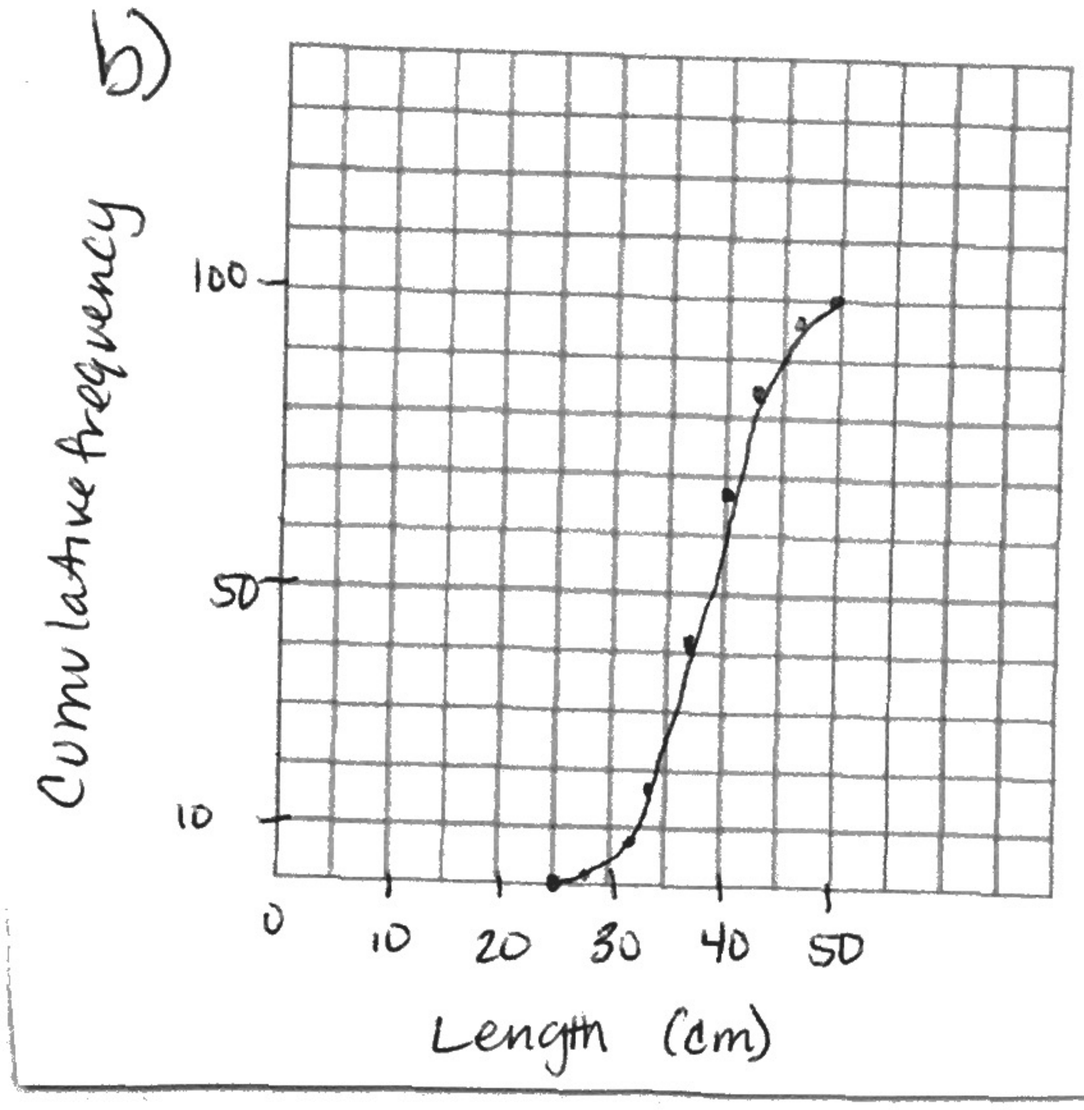
#5 a)

cumulative frequency
3
7
18
41
69
84
96
100

b)



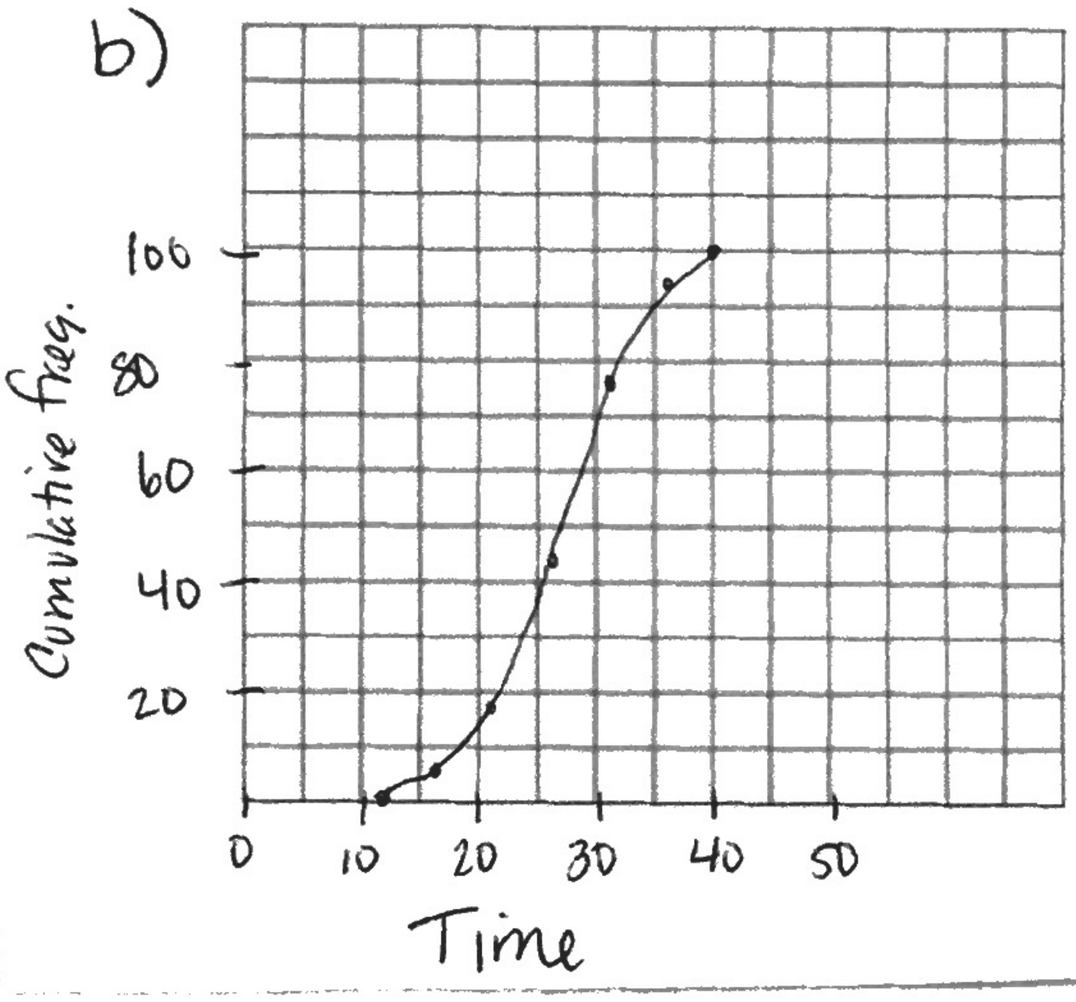
c) i) median = 38 cm

ii) IQR = 41-35 = 6 cm

(6) a)

cumulative frequency
6
19
46
77
92
100

b)



c) i) med = 26 min

ii) IQR = 30-22 = 8 min

iii) ≈ 30 min

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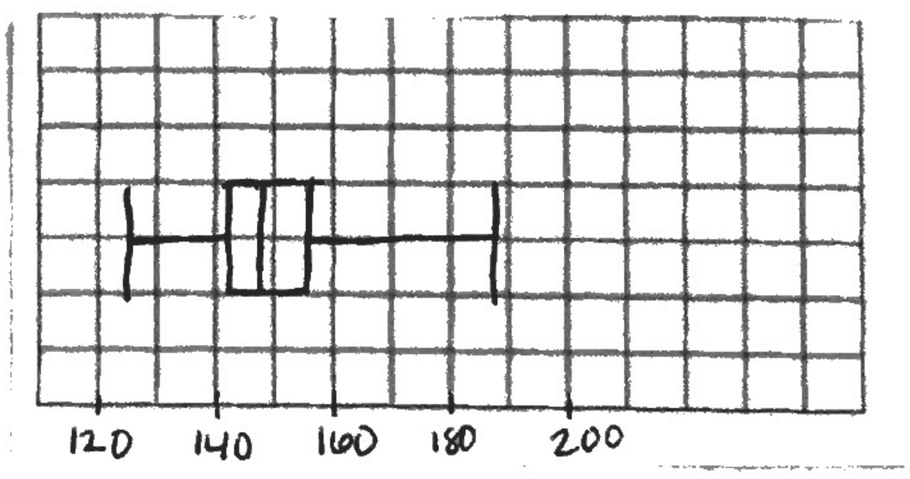
(3) a) i) median = 147 kg

ii) Q_1 = 141 kg

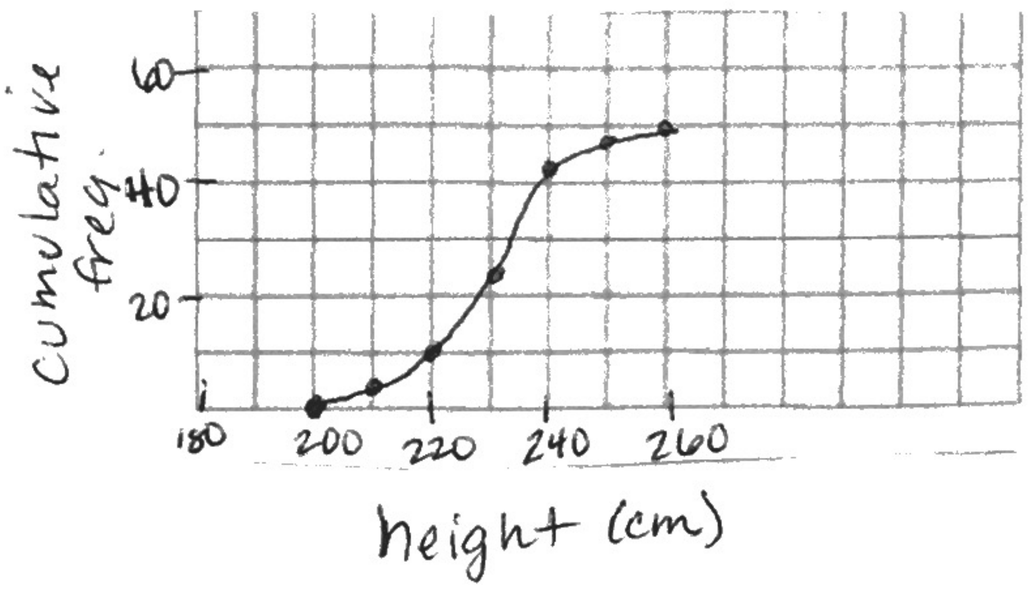
iii) Q_3 = 155 kg

b)



(5) a)

cumulative frequency
4
10
21
43
48
50

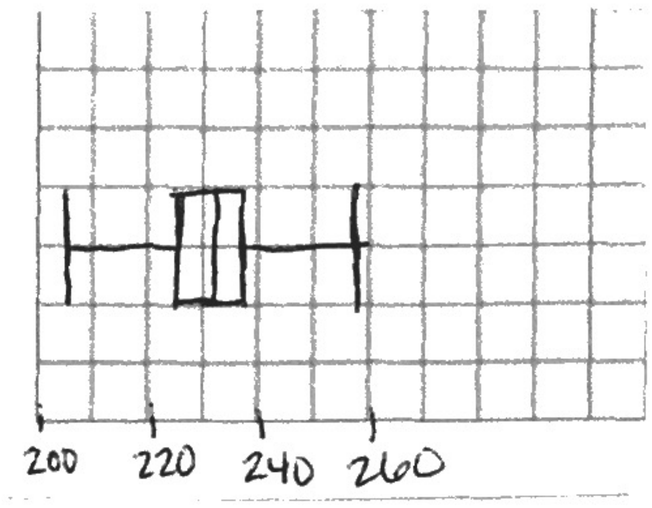


b) median ≈ 232 cm

c) $Q_1 \approx 223$cm

$Q_3 \approx 237$ cm

d)



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(3) a) 22 b) 44 c) 53 d) 22

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(6) a) $\frac{16+41+24+62+18+25+x}{7} = 33$

$x = 45$

b) $\sigma_x = 15.6$ c) range = 46

d) IQR = 27

(7) $80-(7+21+22+11+7+3)=m$

$m = 9$

b) mean = 12.7 c) $\sigma_x = 1.49$

d) IQR = 2

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(9) mean = 32min

$\sigma_x = 7.57$min

(10) a) girls: $\bar{x} = 55.4$ boys: $\bar{x} = 51.8$

$\sigma_x = 11.6$ $\sigma_x = 23.1$

b) there is a big difference in the standard deviation meaning that the boys' marks are more spread out than the girls' marks.