

SOLUTIONS TO

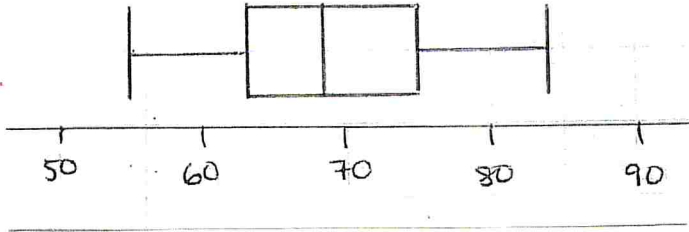
STATISTICS 7 - PROBABILITY + VENN.

Section 1

1a) 39 b) 13 c) 68.5 d) $\frac{Q_1 - 60}{5} = \frac{9}{15} \Rightarrow Q_1 = 63$

e) (i) $75 + 1.5 \times 12 = 93$ $63 - 1.5 \times 12 = 45$ No outliers

(ii)



f) median for 70 closer to 70, Range/IQR for 70 smaller therefore more accurate at drawing 70°

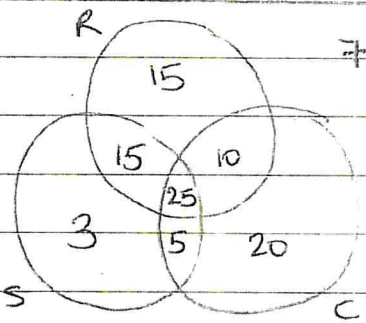
2) a) median = 94.5 $Q_1 = 92$ $Q_3 = 97$

b) $97 + 1.5 \times 5 = 104.5 \rightarrow$ none above

$92 - 1.5 \times 5 = 84.5 \rightarrow$ 69 and 73 are outliers.

Section 2.

1a)



$25 = \checkmark$

$10, 15, 5 = \checkmark$

$3, 15, 20 = \checkmark$

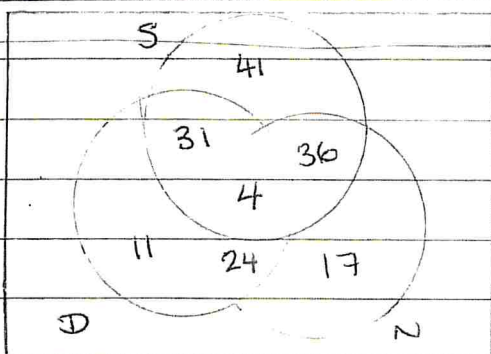
\square and $7 = \checkmark$

b) $\frac{15 + 15 + 25 + 10 + 3 + 5 + 20}{100} = \frac{93}{100}$ $\frac{93}{100} \checkmark \quad | \quad \frac{93}{100} = \frac{7}{100} \checkmark$

c) $\frac{8}{100} \checkmark \checkmark$

d) $\frac{15 + 25 + 10 + 5}{100} = \frac{55}{100} \checkmark$ (10) \checkmark

2) a



$4 = \checkmark$

$31, 24, 36 = \checkmark$

$41, 11, 17 = \checkmark$

$16 = \checkmark$

$\square = \checkmark$

$$b) \frac{16}{180} \quad \checkmark$$

$$c) \frac{17}{180} \quad \checkmark$$

(7)

$$3) a) \frac{2+3}{30} = \frac{1}{6} \quad \checkmark$$

$$b) \frac{4+2+5+3}{30} = \frac{7}{15} \quad \checkmark$$

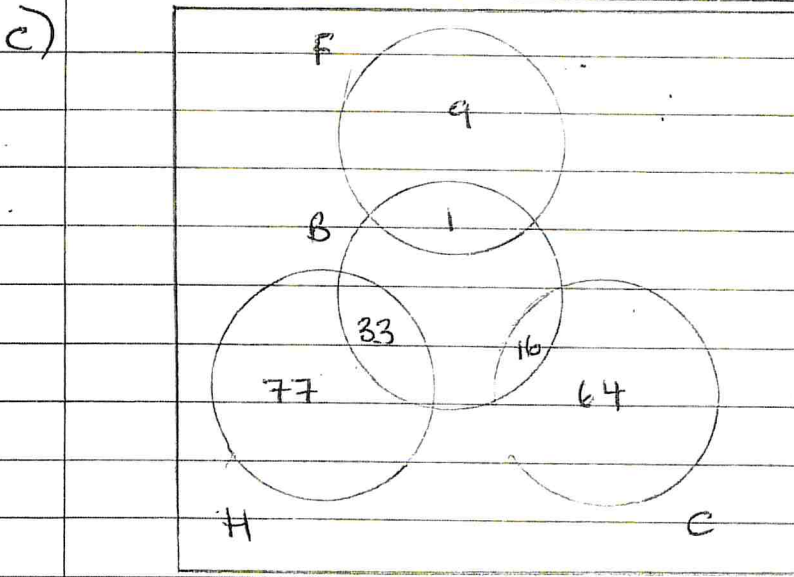
$$c) 0 \quad \checkmark$$

(5)

Section 3.

$$a) P(H) = \frac{35+75}{200} = \frac{11}{20} \quad \checkmark$$

$$b) \frac{198}{200} \quad \checkmark \quad \text{(everyone except the 2 full-time workers who walk)}$$



$$d) \frac{1+33+16}{200} = \frac{1}{4} \quad \checkmark$$