

Revision F4 (Topics 11-14) [37] MARKSCHEME

1.

- (a) 100 – “their attempt at reading at 25”
 Allow misread of scale M1
 $100 - 88, 84 - 100, 89 - 100, 84, 89$
 $88 - 100$ OK
- 12 A1
- (b) 14 B1
Allow a value of 13.5 to 14.5 inclusive
- (c) Locating and subtracting the quartiles M1
 “19” – “10”
(allow $\pm \frac{1}{2}$ square on each reading)
- 8 to 10 A1
Depends on correct M mark if seen

[5]

2.

168	M1 product of 14 and 12 A1 cao
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3.

- Any two different valid comparisons B2
 eg. lowest or highest scores
 lower quartiles
 medians (allow averages)
 IQR or range (allow spread)
B1 for one valid comparison

[2]

4.

- Scale factor $\frac{6}{8}$ M1
- $\frac{6}{8} \times 12$ M1
- 9 A1

[3]

5.

(a)		B3	B2 Any 2 or 3 of the 4 sections correct B1 Any 1 of the 4 sections correct
(b)	$\frac{1}{12}$	B1ft	oe ft their Venn diagram

6.

another age group correct	B1
<i>400 in 20– 40 240 in 40– 60 160 in 60 – 100</i>	
finds total in town to be 960	M1
$240/4 + 3(160)/8$	M1
<i>oe</i>	
$120/960$	A1
<i>1/8</i>	

[4]

7.

48	P1 begins to work with rectangle dimensions eg $l+w=7$ or $2 \times l+w (=11)$ C1 shows a result for a dimension eg using $l=4$ or $w=3$ P1 begins process of finding total area eg $4 \times "3" \times "4"$ A1 cao
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8.

0.22	P1 begins process of subtraction of probabilities from 1 A1 oe
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9.

$\frac{4}{10} \times \frac{6}{10}$ or $\frac{6}{10} \times \frac{5}{9}$	M1
$\frac{4}{10} \times \frac{6}{10} + \frac{6}{10} \times \frac{5}{9}$	M1
(their $\frac{24}{100}$) + (their $\frac{30}{90}$)	M1
<i>or 0.24 + 0.33...</i>	
<i>or 0.57...</i>	
$\frac{43}{75}$	A1

[4]

10.

(a) $\frac{1}{6} \times \frac{1}{6}$ or $\frac{2}{6} \times \frac{2}{6}$ or $\frac{3}{6} \times \frac{3}{6}$ M1

$$\frac{1}{36} + \frac{4}{36} + \frac{9}{36}$$
 M1

Adding the three correct products

$$= \frac{7}{18}$$
 A1

Accept 0.388 or 0.39 or 0.388(...)

or $\frac{14}{36}$

(b) $\frac{2}{6} \times \frac{2}{6}$ or $\frac{4}{36}$ M1

Prob of 2 green

$$\frac{3}{6} \times \frac{1}{6}$$
 or $\frac{3}{6}$ M1

Prob of a red and a blue (either way)

$$\frac{4}{36} + \frac{3}{36} \times 2$$
 M1

Adding correct products

$$\frac{5}{18}$$
 A1

Accept 0.277 or 0.28 or 0.277(...)

10 or $\frac{10}{36}$