Section B

8 $15x+10y=20$
$4x-10y=-58$
Add to get
$19x=-38$

$x=-2,\ y=5$

Condone 1 error at each stage

M1 6x + 4y = 8
M1 6x – 15y = – 87
Subtract to get
M1 19y = 95

[1]

Condone 1 error at each stage

allow M2 for correct multip of 1st eqn. by 2.5, or 2nd equation by 0.4 and M1 for add or subt as reqd.

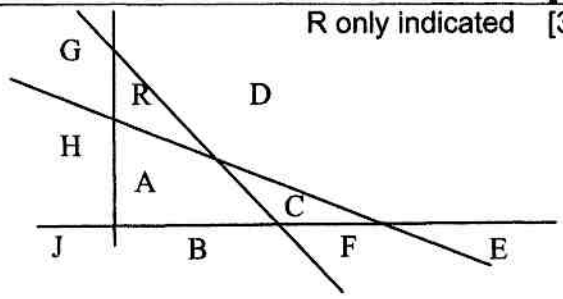
[4]

9 The boys scored better on average. [1]
The boys' scores were more consistent. [1]

1 mark for each true statement that **interprets** the results.

[2]

10



R only indicated [3]

2 for A **and** B, or D **and** E,
or G only
or 1 for H **and** J, or C **and** F, or A only, or B only, or D only.
0 for anything else.
If R and any other region give the lower mark.
Otherwise allow 1 for each **clear** complete correct shading of any line.

[3]

11 **(a)** 26.5% [2]

M1 for 1.1 × 1.15 soi or 1.265 or £15180 seen.

(b) 6 weeks [2]

M1 for trials of 0.88^{n} (n >2) soi.
(e.g. 88, 77.44, 68.14)

[4]

12 **(a)** 1.495×10^{11} [1]

(b) 498.6 to 499 [2]

M1 for figs 1495 ÷ figs 2998
or figs 498(6..... (allowA1 for 498 or 500 after M1)

[3]

13 **(a)** identification of angle 60 or 30 or AG = 40 1

Use of 69 with 40 or 80 to get 30.4° or 59.6° SC2

$80\times \sin 60$ oe or $\sqrt{80^2-40^2}$ M1
69.2(8...) A1

(b) 114 or 115 (litres). [6]

W5 for 114200 to 114585
or W3 for 82800 to 83160 seen.
or M2 $69(.2...)\times(160+80)\times 5$
or M1 $\frac{69(.2.....)\times(160+80)}{2}$ (×2)
and W2 for 31400 to 31425 seen
or M1 for $\pi \times 25 \times 20^2$ or 40^2
and SC1 for 'their vol' to nearest litre.

[9]

Section B Total:25
Total mark available: 50