| Question Number | Scheme | Marks |
|---|---|---|
| 7(a) | $\left[S_{yy} =\right] 9^2 \times 10 [= 810]$ | M1 |
| | $\left[S_{xy} =\right] 0.8 \times "810" [= 648]$ | M1 |
| | $\sum xy = "648" + \dfrac{104.5 \times 113.6}{10}$ | M1 |
| | $= 1835.12$ | A1 |
| | | (4) |
| (b) | $\left[S_{xx} =\right] 9.3^2 \times 10 [= 864.9]$ | M1 |
| | $b = \dfrac{"648"}{"864.9"} \left[= 0.7492...\right]$ or $b = \dfrac{\left(\dfrac{"648"}{\sqrt{"810" \times "864.9"}}\right)^2}{0.8} [= .7492...]$ | M1 |
| | $a = 11.36 - "0.7492"... \times 10.45 \left[= 3.530...\right]$ | M1 |
| | $y = 3.53 + 0.749x$ | A1 |
| | | (4) |

**NB Any solutions using Cov(x, y) Please send to review**

| | Notes | | Total 8 |
|---|---|---|---|
| | **Mark parts (a) and (b) together** | | |
| (a) | **M1** | for a correct method to find $S_{yy}$ May be implied by 810 | |
| | **M1** | for a correct method to find $S_{xy}$ ft $S_{yy}$ May be implied by 648 | |
| | **M1** | for a correct method to find $\sum xy$ ft $S_{xy}$ (may need to check this if no working shown) | |
| | **A1** | Allow $\frac{45878}{25}$ | |
| (b) | **M1** | for a correct method to find $S_{xx}$ May be implied by 864.9 May be seen in part (a) | |
| | **M1** | for a correct method to find $b$ ft $S_{xy}$ and $S_{xx}$ or ft their $S_{xy}$, $S_{yy}$ and $S_{xx}$ | |
| | **M1** | for a correct method to find $a$ ft their $b$ Do not allow $b = 0.8$ | |
| | **A1** | for $y$ = awrt 3.53 + awrt 0.749$x$ | |