| Simple Probability Mark Scheme |  |  |
| :---: | :---: | :---: |
| 1(a) |  | [1] Correct position of cross |
| 1(b) |  | [1] Very close too or on 0 |
| 1(c) |  | [1] Correct position of cross |
| 1(d) |  | [1] Correct position of cross |
| 2(a) |  | [1] Correct position of cross |
| 2(b) |  | [1] Correct position of cross |
| 2(c) |  | [1] Correct position of cross |
|  |  |  |


| 3(a) | $\frac{1}{6}$ |  |  |  | [1] |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3(b) | $\frac{3}{6}=\frac{1}{2}$ |  |  |  | [1] Mark awarded regardless of cancelling down |
| 3(c) | The dice is likely biased as would expect 100 sixes |  |  |  | [1] Accept it could have happened by chance |
| 4(a) | Colour | Blue | Red | Green | [1] Probability for red $\left(1-\frac{1}{3}-\frac{1}{6}\right)$ |
|  | Probability | $\frac{1}{3}$ | $\frac{1}{2}$ | $\frac{1}{6}$ |  |
| 4(b) | $180 \times \frac{1}{3}=60$ |  |  |  | [1] |
| 4(c) | Outcome due to chance |  |  |  | [1] |
| 5 | $\begin{aligned} & P(H, T, H)=0.5 \times 0.5 \times 0.5=0.125 \\ & P(T, T, T)=0.5 \times 0.5 \times 0.5=0.125 \end{aligned}$ |  |  |  | [1] Calculation of the event probabilities |
|  | Ben is incorrect, the likelihood of both events is equal. |  |  |  | [1] Statement of why ben is incorrect |
| 6 | Sonya is most likely to be the closest to the true probability because she did the most trials (120), compared to Clive and Lucy (30 and 60, respectively). |  |  |  | [1] Comment must be linked to number of repeats / sample size. |
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