**Paper: 1MA1/3H**

| Question | Answer | Mark | Mark scheme | Additional guidance |
|---|---|---|---|---|
| 15 | Shown | M1 | for one correct product<br>**eg** $\frac{7}{10}\times\frac{7}{10}\times\frac{7}{10}(=\frac{343}{1000})$ oe **or** $\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}$ $(=\frac{147}{1000})$ oe<br>**or** $\frac{3}{10}\times\frac{3}{10}\times\frac{3}{10}(=\frac{27}{1000})$ oe **or** $\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}$ $(=\frac{63}{1000})$ oe<br>**or** $\frac{7}{10}\times\frac{7}{10}(=\frac{49}{100})$ oe **or** $\frac{3}{10}\times\frac{3}{10}(=\frac{9}{100})$ oe | Throughout accept probabilities given as decimals or percentages<br>Condone sampling without replacement for the first method mark only provided it is in the form $\frac{a}{10}\times\frac{b}{9}\times\frac{c}{8}$ where $a$, $b$, $c$ are integers and $a < 10$ and $b < 9$ and $c < 8$ |
| | | M1 | for $\frac{7}{10}\times\frac{7}{10}\times\frac{7}{10}(=\frac{343}{1000})$ oe **and** $\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}$ $(=\frac{147}{1000})$ oe<br>or $\frac{3}{10}\times\frac{3}{10}\times\frac{3}{10}(=\frac{27}{1000})$ oe **and** $\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}$ $(=\frac{63}{1000})$ oe<br>or $\frac{7}{10}\times\frac{7}{10}(=\frac{49}{100})$ oe **and** $\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}$ $(=\frac{147}{1000})$ oe<br>or $\frac{3}{10}\times\frac{3}{10}(=\frac{9}{100})$ oe **and** $\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}$ $(=\frac{63}{1000})$ oe | Condone any labelling, even if incorrect for the method marks ÷ |
| | | M1 | for $\frac{7}{10}\times\frac{7}{10}\times\frac{7}{10}$ oe **and** $3\times\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}$ oe<br>**or** $\frac{3}{10}\times\frac{3}{10}\times\frac{3}{10}$ oe **and** $3\times\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}$ oe<br>**or** $\frac{7}{10}\times\frac{7}{10}$ oe **and** $2\times\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}$ oe<br>**or** $\frac{3}{10}\times\frac{3}{10}$ oe **and** $2\times\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}$ oe | |

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|---|---|---|---|---|
| | | C1 | for a complete method and chain of reasoning leading to $\frac{98}{125}$<br>eg $\frac{7}{10}\times\frac{7}{10}\times\frac{7}{10}+3\times\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}=\frac{98}{125}$<br>**or** $1-\frac{3}{10}\times\frac{3}{10}\times\frac{3}{10}-3\times\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}=\frac{98}{125}$<br>**or** $\frac{7}{10}\times\frac{7}{10}+2\times\frac{7}{10}\times\frac{7}{10}\times\frac{3}{10}=\frac{98}{125}$<br>**or** $1-\frac{3}{10}\times\frac{3}{10}-2\times\frac{3}{10}\times\frac{3}{10}\times\frac{7}{10}=\frac{98}{125}$ | |