

## Functional Skills Maths Onscreen Mini Test | Level 2

### Probability Of Combined Events | Mark Scheme

Q1

Question	Process	Mark	Mark Grid	Evidence
	Process to find probability of complementary event	1 or	A	$1 - 0.02 (=0.98)$ oe or $1 - 0.6 (=0.4)$ oe
	Accurate figures	2	AB	0.98 oe and 0.4 oe (correctly placed)
	Begins process to find combined probability	1 or	C	$0.02 \times 0.6$
	Full process to find figures for combined probability	2 or	CD	Any decimal consisting of 12 and an arbitrary number of 0s e.g. 0.12 (or equivalent seen as a percentage)
	Accurate figure	3	CDE	0.012 oe
	Accurate figure	1	F	0.9 oe
Total marks for question		6		

Q2

Question	Process	Mark	Mark Grid	Evidence
	Process to find probability of any of the missing events	1 or	A	$1 - \frac{3}{10} (= \frac{7}{10})$ oe or $1 - \frac{4}{5} (= \frac{1}{5})$ oe OR Any one correct probability seen on the diagram.
	Fully correct tree diagram	2	AB	
	Full process to find combined probability	1 or	C	$\frac{3}{10} \times \frac{4}{5} (= \frac{12}{50})$
	Correct answer	2	CD	$\frac{12}{50}$ oe
Total marks for question		4		

Q3

Question	Process	Mark	Mark Grid	Evidence
	Accurate figure	1	A	$\frac{5}{24}$ oe
	Begins process to find probability or identifies square numbers	1 or	B	e.g. $\frac{16}{24}$ oe Identifies at least 3 different square numbers or identifies non-square numbers (allow 2 errors or omission)
	Accurate figure	2	BC	$\frac{18}{24}$ oe
Total marks for question		3		

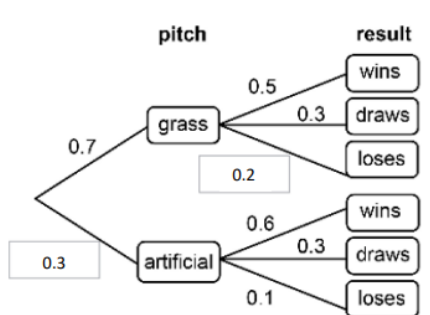
Q4

Question	Process	Mark	Mark Grid	Evidence
	Full process to find combined probability	1 or	A	$\frac{4}{9} \times \frac{2}{3} (= \frac{8}{27})$
	Accurate figure	2	AB	$\frac{8}{27}$ oe Accept 0.3(0), 0.29 or a more accurate figure

Q5

Question	Process	Mark	Mark Grid	Evidence																																													
	Begins to work with probability	1 or	A	$\frac{2}{b}$ where $b > 2$ <b>OR</b> $\frac{2}{8}$																																													
	Accurate figure	2	AB	$\frac{1}{4}$																																													
	Begins to work with 2 events	1 or	C	e.g. Engages with the table <b>OR</b> identifies the 6 correct cells <table border="1"><tr><td>+</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr><tr><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr><tr><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr></table>	+	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	2	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	11	4	5	6	7	8	9	10	11	12
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	Begins to work with probability	2 or	CD	$\frac{a}{32}$ where $a < 32$ <b>OR</b> $\frac{6}{b}$ where $b > 6$																																													
	Accurate probability	3	CDE	$\frac{6}{32}$ <b>or</b> $\frac{3}{16}$																																													
Total marks for question		5																																															

Q6

Question	Process	Mark	Mark Grid	Evidence
	Completes one of the missing probabilities  Fully complete tree diagram	1 or  2	A  AB	0.3 or 0.2 seen in correct box  Completes both missing probabilities  
	Full process to find probability  Valid decision with accurate figure	1 or  2	C or  CD	$0.7 \times 0.5 (=0.35)$  Yes <b>AND</b> 0.35 NB this question requires working shown
Total marks for question		4		