
GCSE Mathematics

Basic Probability & Sample Spaces

Mark Scheme - Foundation Tier | Grades 2-4

M = method mark, A = accuracy mark (dependent on the preceding M mark), B = independent mark.

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Edexcel-style questions

Q1 Grade 2 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	5 out of 10 counters are red	M1
(a)	$\frac{5}{10} = \frac{1}{2}$	A1

Q2 Grade 3 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	HH, HT, TH, TT	M1
(a)	4	A1

Q3 Grade 3 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - 0.3 - 0.25 - 0.2$	M1
(a)	0.25	A1

Q4 Grade 3 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - 0.35$	M1
(a)	0.65	A1

Q5 Grade 4 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	draws the sample-space grid of all 16 totals	M1
(a)	$\frac{4}{16} = \frac{1}{4}$	A1

AQA-style questions

Q6 Grade 2 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	3 out of 8 sections are blue	M1
(a)	$\frac{3}{8}$	A1

Q7 Grade 3 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	HR, HB, HG, TR, TB, TG	M1
(a)	6	A1

Q8 Grade 3 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - 0.4 - 0.15 - 0.3$	M1
(a)	0.15	A1

Q9 Grade 3 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - \frac{3}{8}$	M1
(a)	$\frac{5}{8}$	A1

Q10 Grade 4 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	draws the sample-space grid of all 9 totals	M1
(a)	$\frac{3}{9} = \frac{1}{3}$	A1

OCR-style questions

Q11 Grade 3 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	3 out of 12 pens are white	M1
(a)	$\frac{3}{12} = \frac{1}{4}$	A1

Q12 Grade 3 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	H1, H2, H3, H4, T1, T2, T3, T4	M1
(a)	8	A1

Q13 Grade 4 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - \frac{1}{4} - \frac{1}{3} - \frac{1}{6}$	M1
(a)	$\frac{1}{4}$	A1

Q14 Grade 3 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - 0.72$	M1
(a)	0.28	A1

Q15 Grade 4 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	draws the sample-space grid of all 16 totals	M1
(a)	$\frac{3}{16}$	A1

Teachably-style questions

Q16 Grade 3 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	4 out of 15 beads are blue	M1
(a)	$\frac{4}{15}$	A1

Q17 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	RR, RB, RG, BR, BB, BG, GR, GB, GG	M1
(a)	9	A1

Q18 Grade 3 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - 0.45 - 0.3$	M1
(a)	0.25	A1

Q19 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$1 - \frac{1}{20}$	M1
(a)	$\frac{19}{20}$	A1

Q20 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	draws the sample-space grid of all 25 totals	M1
(a)	$\frac{4}{25}$	A1

END OF PAPER

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