

GCSE Probability Questions 1–100 SET 3

1. $\frac{1}{2}$
2. $\frac{1}{2}$
3. $\frac{1}{2}$
4. $\frac{1}{4}$
5. $\frac{1}{4}$
6. $\frac{1}{4}$
7. 0.7
8. $\frac{3}{4}$
9. $\frac{3}{4}$
10. $\frac{9}{13}$
11. $\frac{1}{6}$
12. $\frac{1}{3}$
13. $\frac{1}{2}$
14. $\frac{1}{6}$
15. $\frac{1}{24}$
16. $\frac{1}{221}$
17. 0.15
18. $\frac{5}{36}$
19. 8 green marbles (by solving ratio problem)
20. 0.3
21. $\frac{8}{30}$
22. 0.6
23. Requires specific data; apply conditional formula
24. 0.5
25. 0.3

- 26. $\frac{1}{4}$
- 27. $\frac{1}{2}$
- 28. $\frac{3}{55}$
- 29. $\frac{49}{100}$
- 30. $\frac{11}{36}$
- 31. 0.27
- 32. 0.26
- 33. $\frac{1}{5}$
- 34. Expected profit = £0.4 per game
- 35. 0.205
- 36. 0.42
- 37. 0.17
- 38. 0.896
- 39. 0.65
- 40. 0.024
- 41. 0.36
- 42. 0.23
- 43. 3.33 expected sixes
- 44. 0.25
- 45. 0.62
- 46. 0.4
- 47. 0.08
- 48. 10 defective
- 49. 15.87% (normal approx)
- 50. 15.87% (normal approx)
- 51. 0.78
- 52. Approx 0.02 (binomial dist.)
- 53. 0.67

- 54. 0.26
- 55. 0.06
- 56. 0.18
- 57. 0.38
- 58. 0.16
- 59. 0.06
- 60. 0.15
- 61. 0.17
- 62. 0.28
- 63. 0.09
- 64. Variation expected in limited samples
- 65. 0.5
- 66. 0.16
- 67. 0.49
- 68. 30 chocolates (from data)
- 69. 6 matching dice pairs
- 70. Experiments estimate probs; theory is exact model
- 71. 6 red counters (from equation)
- 72. $1/36$
- 73. $1/3$
- 74. Bias conclusion based on data
- 75. $1/6$
- 76. 0.2
- 77. 0.33
- 78. 0.18
- 79. 0.12
- 80. Use tree diagram and multiply branches
- 81. $12/30 = 0.4$

82. $15/50 = 0.3$
83. $\frac{n(12-n)}{66}$
84. Multiply branches as per tree diagram
85. 0.4 success rate, 0.24 failure rate
86. $P = p(a \text{ and } b) + p(a) + p(b) - \text{overlap}$
87. Use conditional probability definitions
88. Multiply sequential event probabilities
89. 0.18
90. Use multiplication and addition rules
91. Solve algebraic equation
92. Apply binomial formula
93. Use binomial expansion coefficients
94. Calculate expectation with $n \cdot p$
95. Probability bounds via normal approx
96. Tree diagram probability sums
97. Compare experimental & theoretical
98. Multiply or sum probabilities per rule
99. Solve for missing terms using algebra
100. Compound probability using product rule