# Answers and mark guide

| Q | Answer | Working | Marks |
|---|---|---|---|
| 1 | **12 outcomes: H1 … H6, T1 … T6** | 2 × 6 = 12 | 2 |
| 2 | **11, 12, 13, 21, 22, 23, 31, 32, 33** | 3 × 3 = 9 | 2 |
| 3 | **ABC, ACB, BAC, BCA, CAB, CBA** | 3 × 2 × 1 = 6 | 2 |
| 4 | **HH, HT, TH, TT** | 2 × 2 = 4 | 2 |
| 5 | **1+4, 2+3** | | 2 |
| 6 | **20** | 4 × 5 | 2 |
| 7 | **25** | 5 × 5 | 2 |
| 8 | **9** | 3 × 3 | 2 |
| 9 | **10** | 2 × 5 | 2 |
| 10 | **30** | 5 × 6 | 2 |
| 11 | **6** | 3 × 2 × 1 | 3 |
| 12 | **8** | 2 × 2 × 2 | 3 |
| 13 | **12** | 4 × 3 | 3 |
| 14 | **60** | 5 × 4 × 3 | 3 |
| 15 | **1000000** | 10^6 | 3 |
| 16 | **24** | 4 × 3 × 2 × 1 | 4 |
| 17 | **60** | 5 × 4 × 3 | 4 |
| 18 | **32** | Last digit 2 or 4 (2 ways); first two digits 4 × 4 | 4 |
| 19 | **5** | (2,6),(3,5),(4,4),(5,3),(6,2) | 4 |
| 20 | **15** | 6 × 5 ÷ 2 | 4 |

**My score: _____ / 55** Questions 1–15 = 35 marks (Foundation focus)