



Q	Answer	Marks
1	160	2
2	$\frac{4}{5}$	2
3	a) 0.55 b) 0.45	3
4	a) rows: 2 3 4 5 / 3 4 5 6 / 4 5 6 7 / 5 6 7 8 b) $4/16 = 1/4$ c) $3/16$	4
5	a) A and C (an even number cannot be an odd prime) b) $10/12 = 5/6$ c) 10 is in both A and B, so A and B are not mutually exclusive; $P(A \text{ or } B) = 7/12$, not $8/12$	4
6	a) 0.3 b) 60	4
7	a) $P(\text{Theo}) = 9/36 = 1/4$ and $P(\text{Zainab}) = 27/36 = 3/4$, so they do not have the same chance b) 15 c) No - 18 is close to the expected 15; real results vary from the expected number	4
8	a) afternoon = 35; morning not yoga = 15; afternoon not yoga = 23 b) $3/8$	4
9	a) 50 b) 28 c) $11/39$	5
10	a) 9000 b) $1/9000$	3
11	a) $P(\text{red}) = 0.3$ and $P(\text{blue}) = 0.7$ on every pair of branches b) 0.49	3
EXTENSION QUESTIONS		
12	a) Boys: 12, 36, 48; Girls: 8, 24, 32; Total: 20, 60, 80 b) $8/32 = 1/4$ c) Yes: $P(\text{chess}) = 20/80 = 1/4$, the same as $P(\text{chess given girl}) = 1/4$	5
13	a) I only 18, I and C 7, C only 11, outside 24 b) $18/60 = 3/10$ c) $35/60 = 7/12$ d) $7/18$	5
14	a) first pick $5/9$ and $4/9$; second pick $4/8$, $4/8$ after red and $5/8$, $3/8$ after blue b) $5/6$	5

Full worked solutions, written out by hand, are on the solutions sheet for this topic.