Year 9 Probability – Foundation

ANSWER KEY HappyKids.fit

Answers and worked solutions · 10 questions

A. Probability skills

1. P(snowy) = 0.1; P(sunny or snowy) = 0.4

All four add up to 1: 1 − 0.3 − 0.45 − 0.15 = 0.1

P(sunny or snowy) = 0.3 + 0.1 = 0.4

2. P(black) = 0.2; P(red or black) = 0.6

All four add up to 1: 1 − 0.4 − 0.3 − 0.1 = 0.2

P(red or black) = 0.4 + 0.2 = 0.6

3. 0.315

P(not A) = 1 − 0.3 = 0.7; P(not B) = 1 − 0.55 = 0.45

0.7 × 0.45 = 0.315

4. 1/5

P(tails) = 1/2; P(greater than 3) = 2/5

Independent, so multiply: 1/2 × 2/5 = 1/5

5. 1/8

The grid has 8 × 4 = 32 equally likely outcomes; 4 of them work

P = 4/32 = 1/8

6. 2/9

The grid has 6 × 3 = 18 equally likely outcomes; 4 of them work

P = 4/18 = 2/9

7. 1/2

Numbers that work: 3, 4, 6, 8, 9, 12, 15, 16, 18, 20, 21, 24

P = 12/24 = 1/2

8. 1/6

Numbers that work: 1, 4, 9, 16, 25, 36

P = 6/36 = 1/6

9. 1/3; 1/7

Total: 7 + 3 + 8 + 3 = 21

owns a cat but not a dog: 7, so 1/3

owns a cat and a dog: 3, so 1/7

10. 5/7

55 of the 77 fit

P = 55/77 = 5/7