Year 8 Probability – Developing

ANSWER KEY HappyKids.fit

Answers and worked solutions · 10 questions

A. Use probability

1. **3/4**

20 equally likely outcomes, 15 successful

P = 15/20 = 3/4

2. **1/4**

8 equally likely outcomes, 2 successful

P = 2/8 = 1/4

3. **1/10**

20 equally likely outcomes, 2 successful

P = 2/20 = 1/10

4. **1/10; expected 10; possibly: there are noticeably more or fewer 6s than expected, so do more trials**

Experimental: 6/60 = 1/10

Expected: 1/6 × 60 = 10

Difference: 4

5. **experimental 13/40; theoretical 1/4; expected 10**

Experimental: 13/40 = 13/40

Theoretical: 1/4 = 1/4

Expected: 1/4 × 40 = 10

6. **experimental 47/100; theoretical 1/2; expected 50**

Experimental: 47/100 = 47/100

Theoretical: 5/10 = 1/2

Expected: 1/2 × 100 = 50

7. **3/4**

A 4 × 4 grid gives 16 equally likely outcomes; 12 of them work

P = 12/16 = 3/4

8. **1/12**

A 6 × 6 grid gives 36 equally likely outcomes; 3 of them work

P = 3/36 = 1/12

9. **3/5**

The event and its complement have probabilities that add up to 1

1 − 2/5 = 3/5

10. **Complementary events add up to 1: P(not late) = 1 − 0.15 = 0.85.**

Error: the probabilities do not add up to 1

1 − 0.15

= 0.85