GCSE FOUNDATION · REVISION MAT 1

Expected outcomes

1 The probability that an item will land on red is 0.2.

There are 150 trials.

How many times would you expect it to land on red?

2 A fair dice is rolled 120 times.

How many times would you expect to roll a 6?

3 Sam rolls a fair dice 60 times and gets 14 sixes.

Sam expected 10. Explain why the results are different.

4 The probability of winning a game is 0.3.

Show that you would expect to win 12 times in 40 games.

5 A game costs 50p to play. The probability of winning is 0.1. A winner gets £3.

The game is played 200 times.

How much profit should the owner expect?

6 A sample of 40 items is taken from a batch of 500.

12 of the sample are red sweets.

Estimate the number of red sweets in the whole batch.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Expected outcomes

1 $0.2 \times 150 = \mathbf{30}$

2 $\frac{1}{6} \times 120 = \mathbf{20}$

3 Expected results are only what happens on average in the long run.

Results vary by chance, especially with a small number of trials.

4 $0.3 \times 40 = \mathbf{12}$ ✓

5 Money in: 200 × £0.50 = £100.00

Expected winners: 0.1 × 200 = 20, paid £60.00

Profit ≈ **£40.00**

6 $12 \div 40 \times 500 = \mathbf{150}$