Likelihood, experiments and variation

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Show your thinking using words, working or a labelled drawing. Use the explanations and example first.

What you will practise

• Likelihood, experiments and variation

• Explain and check an answer with an appropriate representation.

Useful starting skills: Use objects, drawings or a number line to explain a simple idea.

Start by listing what can happen and stating the chance model. A fair device has specified equally likely elementary outcomes; categories formed from those outcomes need not have equal chances.

Record trials systematically and compare frequencies. Chance experiments vary from run to run. Repeating more trials can reveal a pattern, but it does not guarantee a particular next outcome or exact total.

Worked example

A bag contains 6 red and 2 blue identical counters. Which colour is more likely?

There are more red counters among the eight equally selectable counters.

Red is more likely, but blue can still occur.

Answer: Red

Try it yourself

Name: _____ Date: _____

1. BagA has 9 red and 1 blue counter. BagB has 5 red and 5 blue. Which offers a greater chance of red?

2. Is drawing a second counter without replacing the first independent of the first draw?

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. BagA

Both have ten counters, but A has more red favourable outcomes.

2. No; it is dependent

The first draw changes the contents and hence the next probabilities.

Curriculum reference: VC2M4P01; VC2M4P02

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