

That complementary events have a combined probability of one; use...

recognise that complementary events have a combined probability of one; use this relationship to calculate probabilities in applied contexts

Learning intention

- recognise that complementary events have a combined probability of one; use this relationship to calculate probabilities in applied contexts

Teach and model

- understanding that knowing the probability of an event allows the probability of its complement to be found, including for those events that are not equally likely, such as...
- using the relationship that for a single event A , $\Pr(A) + \Pr(\text{not } A) = 1$; for example, if the probability that it rains on a particular day is 80%, the probability that it does not...
- using the sum of probabilities to solve problems, such as the probability of starting a game by throwing a 5 or 6 on a dice is $\frac{1}{3}$ and probability of not throwing a 5 or...

Check understanding

- Explain the main idea in that complementary events have a combined probability of one; use... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.