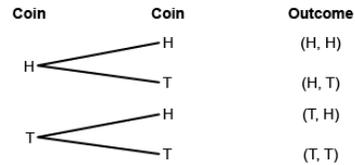


Activity 8 Assessment

Independent Events

Listing All Possible Outcomes of an Experiment

Uses a tree diagram to determine all possible outcomes of an experiment.



“There are 3 possible outcomes:
2 heads, 2 tails,
and 1 head and 1 tail.”

Uses a table or organized list to determine all possible outcomes of an experiment.

The principal can choose from 2 colours of pants (purple or red) and 3 colours of shirts (green, orange, or pink).

Combination
Purple pants and green shirt
Purple pants and orange shirt
Purple pants and pink shirt
Red pants and green shirt
Red pants and orange shirt
Red pants and pink shirt

“I chose one pant colour, then matched it with each shirt colour.”

Determines the theoretical probability using a tree diagram, table, or organized list.

Outcome	Theoretical Probability
2 heads	1 out of 4, or $\frac{1}{4}$, or 0.25, or 25%
1 head and 1 tail	2 out of 4, or $\frac{2}{4} = \frac{1}{2}$, or 0.5, or 50%
2 tails	1 out of 4, or $\frac{1}{4}$, or 0.25, or 25%

“I divided the number of favourable outcomes by the total number of outcomes to find the theoretical probabilities.”

Flexibly determines theoretical probability and knows that the sum of probabilities is 1 or 100%.

Outcome	Theoretical Probability
2 heads	1 out of 4, or $\frac{1}{4}$, or 0.25, or 25%
1 head and 1 tail	2 out of 4, or $\frac{2}{4} = \frac{1}{2}$, or 0.5, or 50%
2 tails	1 out of 4, or $\frac{1}{4}$, or 0.25, or 25%

“It is certain that one of the possible outcomes will occur, and the probability of a certain event is 1. So, the sum of the probabilities of all possible outcomes must be 1 or 100%.”

Observations/Documentation