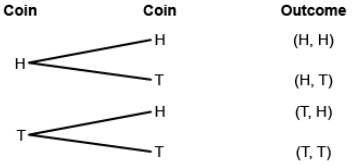
Data Management and Probability

Activity 8 Assessment

Independent Events

Listing All Possible Outcomes of an Experiment

Uses a tree diagram to determine all possible outcomes of an experiment.	Uses a table or organized list to determine all possible outcomes of an experiment.	Determines the theoretical probability using a tree diagram, table, or organized list.	Flexibly determines theoretical probability and knows that the sum of probabilities is 1 or 100%.
 "There are 3 possible outcomes: 2 heads, 2 tails, and 1 head and 1 tail."	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."	**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."	**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			