

OUTCOMES USING FRACTIONS, SUM EQUALS 1, LIKELIHOOD.

INVESTIGATIONS OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING. INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

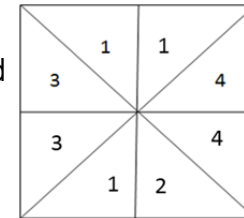
- In pairs, children select numbers of counters of different colours, for example 10 red, 15 yellow and 5 green. They list the probabilities of each outcome using fractions. They explain that the sum of all probabilities is 1. They identify which colour would give the best probability of winning?

Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?

- In pairs, children conduct a chance experiment, for example, make a spinner where numbers / colours / symbols are recorded an unequal number of times.

They list the probabilities of each outcome using fractions, verifying that the sum of the probabilities is 1.

Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?



- In pairs, children select 3 different colour counters. They make given probabilities of selecting each colour, for example, $\frac{5}{20}$, $\frac{8}{20}$, and $\frac{7}{20}$. They identify the number of each colour. They verify that the sum of the probabilities is 1. Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?
- In pairs, children record probabilities of outcomes using fractions, for example, $\frac{2}{6}$, $\frac{3}{6}$, and $\frac{1}{6}$. They verify that the sum of the probabilities is 1. They design a spinner with those probabilities using colours or numbers or shapes. Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?

Outcomes using Fractions, Sum Equals 1, Likelihood

Select numbers of counters of different colours, for example 10 red, 15 yellow and 5 green.

List the probabilities of each outcome using fractions.

Is the sum of all probabilities, 1?

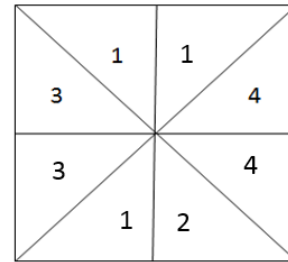
Which colour would you select to give you the best probability of winning?

Reflection: How can we work out probabilities using fractions, verifying that the sum of the probabilities equals 1?

Outcomes using Fractions, Sum Equals 1, Likelihood

Conduct a chance experiment, for example, make a spinner where numbers / colours / symbols are recorded an unequal number of times.

List the probabilities of each outcome using fractions, verifying that the sum of the probabilities is 1.



Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?

Outcomes using Fractions, Sum Equals 1, Likelihood

Select 3 different colour counters.

Make given probabilities of selecting each colour, for example, $\frac{5}{20}$, $\frac{8}{20}$, and $\frac{7}{20}$.

Identify the number of each colour.

Verify that the sum of the probabilities is 1.

Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?

Outcomes using Fractions, Sum Equals 1, Likelihood

Record probabilities of outcomes using fractions, for example, $\frac{2}{6}$, $\frac{3}{6}$, and $\frac{1}{6}$.

Design a spinner or dice with those probabilities using colours or numbers or shapes.

Verify that the sum of the probabilities is 1.

Reflection: How can we work out probabilities using fractions, verifying that the sum of the fractions equals 1?