

Workcard

Number

cd51w2

Level:

5

Strand: **Chance and Data** Substrand: **Understand Chance****Chances as Fractions and Percentages**

All probabilities can be expression as a fraction/ percentage or both.

Probability fractions are the number of successful events over the total number of possibilities.

For example if I have the number from 1 to 10 in bag the probability of drawing out the number 8 is

1 (Number of successful events, there is one number 8)

10 (Total number of possibilities, There are ten numbers to choose from)

This can be converted to a percentage by dividing the numerator by the denominator and multiplying by 100. e.g. $(1 \div 10) \times 100 = 10\%$

BOTTOM NUMBERS

How many different outcomes can you getting from the following events? List the outcomes.

- Flipping a coin – 2 outcomes – head or tail
- Rolling a dice
- Drawing a card from a normal deck with no jokers.
- Selecting students from a class with 14 boys and 18 girls.

TOP NUMBERS

- How many tails are there on a coin?
- How many number 3 are there on a die
- How many even numbers are there on a die
- How many ace of diamonds are there in a pack of cards
- How many kings are there in a pack of cards
- How many hearts are there in a pack of cards

Write down fractions and percentages to describe the probabilities for these events.

- Flipping a coin and getting a tail
- Rolling a dice and getting the number 3
- Rolling a dice and getting an even number
- Drawing the ace of diamonds from a pack of cards
- Drawing a king from a pack of cards
- Drawing a heart from a pack of cards
- Selecting a boy from a class with 14 boys and 18 girls.

Describe events which might have this chance

$\frac{1}{2}$	
$\frac{1}{4}$	
$\frac{3}{4}$	
$\frac{1}{6}$	
$\frac{3}{6}$	
10%	
33%	
50%	

Reflection

Do you prefer to use fractions or percentages for probability?

What does it mean if something has a $\frac{1}{4}$ probability of happening?

If something has a 100 % chance of happening what does it mean?