

# 3-6: REMOTE MATHS

EDITION 2

## THE LIKELIHOOD OF EVENTS

**Mathematical language:** h=Heads/ tails, likelihood, spins/spinner, trails, chance, least likely, most likely, related/unrelated, certain, chance, doubt, fair, poor chance, no chance, risk, uncertain, unfair, bias, equal, random

### TASK 1: HOW LIKELY?

Rank the events in the table from least likely to most likely to occur. Share your rankings with a family member and explain why you made your choices.

You will see a dog	It will be Monday tomorrow
You will go for a swim at the beach	It will be midday at sometime today
An elephant will grow wings and fly	It will rain today
You will eat something sweet	A monkey will knock on your front door
You will go to the movies	You will wear red
It will snow	You will have pizza for dinner

Create your own table of events and ask a family member to rank them from least to most likely to occur.

### TASK 2: FOUL FOOD

Write a set of five questions about food and/or drink. For example, 'What is the chance I will drink water today?' Each question should have one of the following answers:

- Impossible
- Unlikely
- Equal
- Likely
- Certain

*Future learning:* Play the game Foul Food Maker <http://www.scotle.edu.au/ec/viewing/L168/index.html>

## EDITION 2: THE LIKELIHOOD OF EVENTS (CONT.)

### TASK 3: A BIT OF A DICEY PROBLEM

- Look at these two dice. If you add together the number of dots on top of them, the total is 2.
- When you roll two ordinary six-faced dice like these and add together the two numbers, what results could you get? Do you have more chance of getting one answer than any other? If so, what is that answer? And why? What if you use a dice with 10 numbers on, like these?



- What answers could you get now? Do you have more chance of getting one answer than any other?
- If so, what is that answer? And why?
- Now try with more dice or a mixture of dice. What do you notice now?

Adapted from NRICH task <https://rich.maths.org/1077>

### TASK 4: HEADS OR TAILS

To complete this task you will need three coins. Toss the coins 10 times and record your results in a table. In this example we noticed that there was never a result of all heads (HHH).

Toss	1	2	3	4	5	6	7	8	9	10
Result	HHT	HTH	HTT	HHT	TTT	TTT	HTT	THH	HHT	HTH

What's is the chance of tossing 3 heads? Can you explain the chance using a tree diagram? Can you explain the chance as a fraction or a percentage? Check your work by tossing the coins another 20 times. Record your results on a table. Did you toss three heads? Can you explain your amount of times you tossed three heads as a fraction or a percentage?

A **tree diagram** is used to indicate the relationship between sets or events, for example a family tree. Tree diagrams can also be used to represent the set of outcomes of a multi-step random experiment, for example, listing the possible outcomes when a coin is tossed twice.

<https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/maths/Pages/glossary.aspx>

# SOLVING SIMPLE ADDITION PROBLEMS

**Mathematical language:** Approximate, basic facts, calculate, jump strategy, rename, rounding, numeral, result, solve, algorithm.

*Note: It is important that children use concrete materials to assist their understanding of mathematics concepts. It is ideal to use counters to assist with addition. If these are not available, use small collections of items such as buttons, coins, blocks, pieces of pasta, dried chickpeas, same size Lego etc. Providing children with a collection of items they can combine, and count with will assist their understanding of addition.*

## TASK 1: MISSING NUMBERS

- Pick one of the equations with missing numbers. What number can you place in the boxes to make the equation true? There is more than one answer, can you find them all?
- $2\boxed{\phantom{0}} + 3\boxed{\phantom{0}} = \boxed{\phantom{0}}0$
- $2\boxed{\phantom{0}}6 + \boxed{\phantom{0}}7 = \boxed{\phantom{0}}3\boxed{\phantom{0}}$
- $\boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}} + \boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}} = 4000$

*Adapted from tasks in Open Ended Tasks by Peter Sullivan*

## TASK 2: CHALLENGING TASK: FINDING FIFTEEN

- Tim had nine cards, each with a different number from 1 to 9 on it. He put the cards into three piles so that the total in each pile was 15. How could he have done this?
- Can you find all the different ways Tim could have done this?
- You may like to print off and cut out these digit cards to help you: <https://nrich.maths.org/content/id/2645/Finding%20Fifteen.pdf>

<https://nrich.maths.org/2645>

## TASK 3: ADDITION

Addition can be solved and represented in many ways.

Choose an equation (right) and represent it by completing the tasks.

- Worded problem: Write a number story
- Visual: Draw a picture
- Number line: Show the problem on a number line
- Concrete: Use concrete materials such as MAB (or draw them).

$47 + 82 = 129$
$173 + 269 + 442$
$818 + 503 = 1321$

## EDITION 2: SOLVING SIMPLE ADDITION PROBLEMS (CONT.)

### TASK 3: PRACTISING ADDITION

In 2020 there has only been one round of AFL played. Can you estimate how many kicks were recorded in the first round? The table shows how many kicks were recorded.

- Pick three, four or five teams and calculate the total number of kicks recorded. Complete these calculations with a different set of teams. What strategy did you use? Check your answers with a family member and a calculator.
- Can you think of a good strategy to add the total number of kicks together?
- *Taking it further:* Investigate different statistics from round one and write some addition questions that relate to these statistics.

Adelaide Crows	142	Brisbane Lions	184	Carlton	189	Collingwood	191
Essendon	192	Fremantle	166	GWS Giants	167	Geelong Cats	176
Gold Coast Suns	173	Hawthorn	187	Melbourne	177	North Melbourne	155
Port Adelaide	219	Richmond	155	St Kilda	167	Sydney Swans	200
West Coast Eagles	215	Western Bulldogs	163				

## MATHS APP OF THE WEEK: MADE BY MATHS



The Made By Maths App is a comprehensive guide that explores mathematical beauty of key landmarks, structures and architecture.

The intent of the **Explore your world** walk is to encourage walkers to discover mathematics in the built and natural environment. The different stops provide the opportunity to develop a mathematical lens through which to view and interpret the world around the walker. The focus of the walk is to exploit each location by initiating a mathematical investigation. It is the intent of the walk that participants will come to identify other opportunities for investigation.

**Suitable:** levels 5 to 8

**Location:** your school or local area.

**iOS:** <https://apps.apple.com/au/app/made-by-maths/id892279075>

**Cost:** Free

*Look out for more tasks next week!*