3-6: REMOTE MATHS
EDITION 8

PLACE VALUE - DECIMAL SYSTEM AND NUMBER LINES

Mathematical language: Number line, quantity, hundreds, thousands, tenths, ones, hundredths, estimation, reasoning.

TASK 1: DECIMAL NUMBERS

Using a number line and your knowledge decimals, provide as many solutions as you can to these tasks.

- I am thinking of a number below zero with a 7 in the tenths place what might it be?
- What are some possibilities for a number between 0 and 1 with a 7 in the hundredths place, can you think of some different possibilities?
- Draw these numbers on a number line.

0   1

TASK 2: CHEESEBALLS   *Source Estimation 180*

Make an estimate: How many cheeseballs will fit in the tray? To help your estimation predict

- What is too high?
- What is too low?
- Explain your reasoning.
- Now check out this video to see the answer www.estimation180.com/day-206.html
- Were you close? Why or why not?

Extending prompt: What is the difference between your estimation and the actual quantity?

TASK 3: ORIGINAL NUMBER

Someone has written a number in words but the words have been cut up and mixed. What might the original number be? How many different combinations could there be?

| three | four | sixty | seven | and | , | hundred | . | thousand | eight |

TASK 4: DOUBLE HAT TRICK   *Source James Russo, Prime Number journal*

This is a game for two players. You will need two 10 sided dice, if you don't have dice use the simulator http://toytheater.com/dice.

Create an open number line from 0 – 1 (like the number line in Task 1). Each player rolls the dice and makes a two-digit decimal number and places it on the number line, for example if I roll a 2 and a 5 I could make 0.25 or 0.52. To avoid confusion, one player should place their numbers above the number-line, and the other player below the number-line.

The goal is to place four of their numbers in a row on a number-line without their opponent interrupting the sequence.

Watch the video Double Hat Trick https://youtu.be/30ird_abq-w by Michael Minas. This is a less challenging example of the game using whole numbers, your task is to play the game using decimal numbers.

TASK 5: HOPPER NUMBER LINES

Play this online game to help a frog to jump along a number line, www.scootle.edu.au/ec/viewing/L587/index.html.

This game require you to estimate the finishing point on a number line, after adding or subtracting multiples of hundredths to a starting number. Explore the patterns made on a counting grid and number line. Identify counting rules that match the pattern of 'landing spots' on a counting grid.

MAV would love your feedback on these resources. Click on the link or scan the QR code.

https://www.surveymonkey.com/r/MAHhomelearning

LENGTH: CREATING GRAPHS AND SURVEYS

Mathematical language: Axis, label, bar chart, bar graph, chart, column graph, table, pie chart/graph, questionnaire, survey, summarise, line graph, statistics.

TASK 1: CREATE A SURVEY

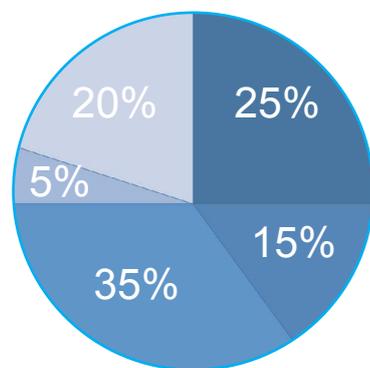Create a simple survey that asks 20 people which cuisine they prefer. Think about:

- What is a good question to ask?
- How will you share the information you have collected?
- Create a graph to share the information.

TASK 2: DIFFERENT FORMS OF GRAPHS

This graph shows the results of a survey.

- What could the survey be about?
- Create a different graph to show the data in a different way?
- You may like to look at this online resource to investigate different types of graphs.

http://studyjams.scholastic.com/studyjams/jams/math/data-analysis/correct-graph.htm

TASK 3: FIRST FLEET DATA SET *Source FUSE, Department of Education*

The First Fleet dataset resource, https://fuse.education.vic.gov.au/Resource/ByPin?Pin=99BCWX&SearchScope=All, provides information about 780 of the convicts transported to Australia on the First Fleet ships *Alexander*, *Charlotte*, *Lady Penrhyn*, *Friendship*, *Prince of Wales* and *Scarborough* in 1788. The dataset includes information on items such as the convict's name, occupation, crime, date of trial and term of transportation.

View the First Fleet data set and choose an area to explore statistically. For example, you may want to look at crime, occupation, place of trial or sentence.

Share the information you have investigated through creating a table and graph. You may find Excel helpful in completing this task.

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TASK 4: GOING FOR GOLD   *Source Nrich*

- The table shows the top ten nations in the table of medal winners for the 2012 Olympic Games.
- How do you think the positions have been decided?
- Could the results be presented differently to give another nation the top place?
- How would this affect other results in the table?
- Create a graph to present the data. You may like to use this resource to assist you https://nces.ed.gov/nceskids/createagraph/

Position	Nation	Gold	Silver	Bronze	Total
1	United States	46	29	29	104
2	China	38	27	23	88
3	Great Britain	29	17	19	65
4	Russian Fed.	24	26	32	85
5	South Korea	13	8	7	28
6	Germany	11	19	14	44
7	France	11	11	12	34
8	Italy	8	9	11	28
9	Hungary	8	4	5	17
10	Australia	7	16	12	35

MATHS APP OF THE WEEK: SUDOKU NUMBER PUZZLE

With Sudoku you now have the famous logic puzzle always with you - for free and offline. Infinite number of Sudoku games guarantee unlimited gameplay. Choose your level of difficulty, use the additional help functions, celebrate your achievements and conquer the leaderboards. With this free Sudoku game you will never run out of puzzles again.

iOS

https://apps.apple.com/au/app/sudoku-number-puzzle-games/id1155868585

Look out for more tasks next week!

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