3-6: REMOTE MATHS

EDITION 10

FACTORS, SPECIAL AND LARGE NUMBERS

Mathematical language: Common factor, composite number, factor, multiples, prime number, product, remainders, squared number

TASK 1: THE REMAINDERS GAME

Play an interactive that generates a secret number between 1 and 100, http://nrich.maths.org/6402.

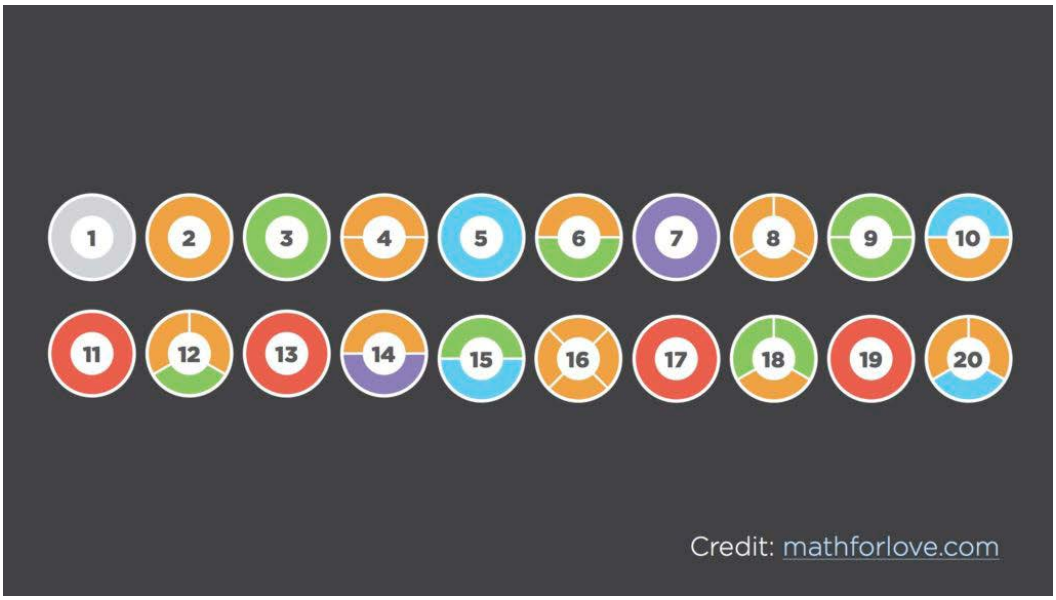
Apply your knowledge of factors, related multiplication facts and counting to identify a mystery number.

Supported with 100 chart at https://www.abcya.com/games/interactive_100_number_chart.

TASK 2: PRIME CLIMB

Look at the number chart below. Write down any patterns that relate to the colours in the chart. What pattern do you notice about the colours of the circles and way each circle is divided? Create a rule for each colour.

Use your rules to colour the number chart in this link, https://mathforlove.com/lesson/prime-climb-color-chart/.



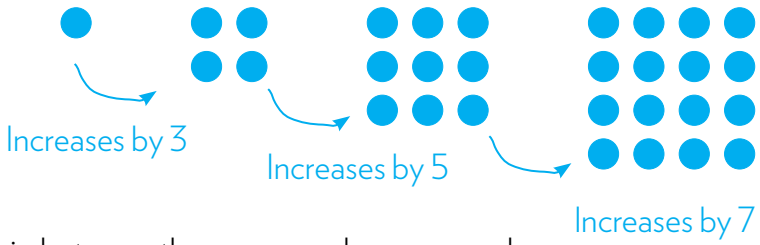
TASK 3: TARGET FACTORS

Play the game Target Factors, practice identifying factors of given numbers. Identify which number is **not** a factor and hit the target. Record your score out of 20.

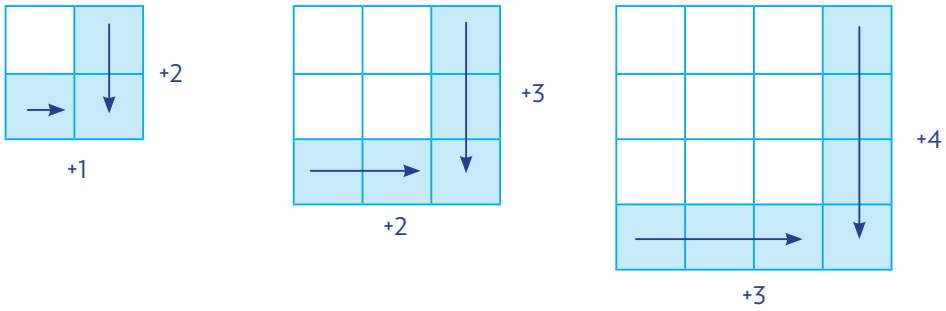
https://www.helpingwithmath.com/resources/games/target_factors01/not_factor.html

TASK 4: SQUARE NUMBERS *Adapted from FUSE.*

Investigate patterns within the square numbers. To complete this activity you will need a collection of around 50 of blocks, counters, pasta, chick peas etc (Any small objects will be appropriate). Begin making the square numbers with counters or blocks, what patterns can you see? How do the numbers grow?



There is a relationship between the square and square numbers.



Create a table that investigates the pattern. Test for square that have 5, 6 and 7 in the first row.

Number on one row	Number in the complete square	Increase in numbers
1	1	-
2	4	2
3	9	5
4	12	7
5		
6		
7		

Create a rule and test it. What if the was a square with 13 in the first row, how many objects would there be altogether? Prove this.

TIMETABLES

Mathematical language: Analogue, digital, am, pm, calendar, hours, minutes, 12 hour time, 24 hour time, months (names), year, timetable.

TASK 1: TRAIN TIMETABLES

Complete this interactive exercise on reading train timetables and making time calculations. Choose your level.

Level 1: Highlighting journeys on a train timetable. Click the cells in the timetable to highlight the journeys.

Level 2: Finding information from a train timetable. Give your time answers in 24 hour time format in the same way it is shown in the timetable.

Level 3: Finding information from a real train timetable. Give your time answers in 24 hour time format in the same way it is shown in the timetable.

TASK 2: 24 HOUR TIME

Watch the video Late Again which explainS the connection between 24 hour and 12 hour time.
https://education.abc.net.au/home#!/media/1566174/

- Write out a list of six – eight daily activities starting from when you get up to when you go to bed. Record the time you do these activities in 12 hour time. Next to each include the 24 hour time.

TASK 3: AROUND THE WORLD *Adapted from FUSE and DET*

Use the website world clock to find the times for places around the world. Create a table to compare the time zones in a Perth, Rome and Melbourne.

- What is the best time to call your family when you arrive in Perth?
- What time will it be in Rome, if it is 5pm in Melbourne?
- When do you depart from Perth? What time will you arrive in Melbourne?
- Travel to a city on every continent and fill in the table above to show the difference in time zones
- Can you name other places (states, cities or towns) that are in the Australian Eastern Standard Time AEST zone?

Destination	Time	Date	Hometown	Time	Date	Time difference
Perth						
London						
Rome						

EDITION 10: TIMETABLES (CONT.)

TASK 4: INVESTIGATING CALENDARS *Adapted from Sullivan 2017*

What months of 2020 start on the same day as each other? Without looking at a 2021 calendar, what months next year start on the same day? Investigate this pattern for 2019 and 2021? What do you notice? What inferences can you make?

TASK 5: HISTORY OF CALENDARS *Adapted from Nrich*

Calendars were one of the earliest calculating devices developed by civilizations. There have been many different calendars, but most are based on the sun, moon, seasons and often involve religious ideas. The Mayans made an incredibly accurate calendar. The Mayan pyramid (Mexico) was built in about 1050 as a huge calendar. It has 91 steps up each side and one platform at the top, making a total of 365 (one for each day of the year). The Mayan calendar was adopted by the Aztecs, who kept the mathematics of the calendar the same, but changed the names of the months.

We take our modern 'western' calendar for granted, but it has passed through a dramatic history, including the famous affair between Julius Caesar and Cleopatra, a bloody war fought over dates! But it is not the only calendar. There are still forty different calendars in use around the world. Investigate these questions:

- Why are there 53 weeks in some years, not 52?
- Which day is the first day of the week, Sunday or Monday?
- Where did the names for the days come from?

MATHS APP OF THE WEEK: MATH CLOCK

Math Clock helps students become fluent working with time. Learners use analog clocks with geared or free-moving hands to learn how to tell time, explore jumps with count by numbers, and visualize story problems involving intervals of time. By placing and shading fraction overlays, students use the clock to contextualize fractions with frequently used denominators.

iOS: https://apps.apple.com/us/app/math-clock-by-mlc/id1444666967?ls=1

Google Play: https://chrome.google.com/webstore/detail/math-clock-by-the-math-le/dmiciodncblfmmchmkihafeiimihaagn

Look out for more tasks next week!