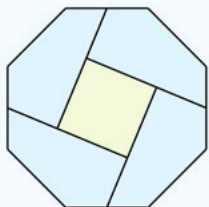


Spring 2020 Solutions

Deputy First Minister's Maths Challenge



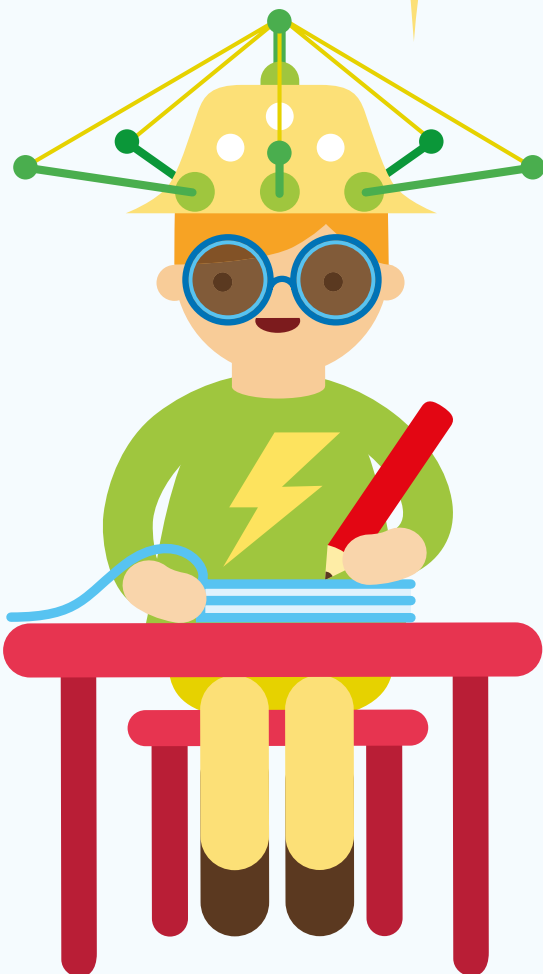
The Scottish
Mathematical
Council



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Puzzle 1 – Mathematical Mind Reader

I hope you enjoyed this! There are lots of amazing number games and tricks like this.



The explanation is for older pupils and adults.

We start with your original number. Call it N .

We add 1 to get $N + 1$.

We double that, which gives us $2*N + 2$.

We add 4, which gives us $2*N + 6$.

We now halve this, which gives us $N + 3$.

We now take away the original number N , which leaves us with 3.

Puzzle 2 – Sum Flowers



How did you get on?
Whilst there are many choices, here
are a few that I have found:

$$51 + 17 + 2$$

$$24 + 45 + 1$$

$$59 + 11$$

$$19 + 5 + 46$$

$$9 + 61$$

$$7 + 2 + 61$$

$$52 + 18$$

$$1 + 52 + 17$$

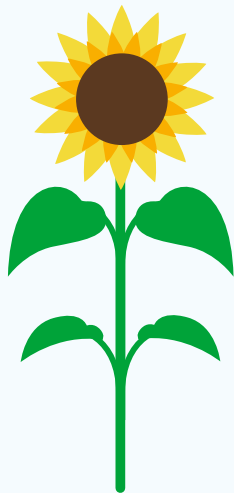
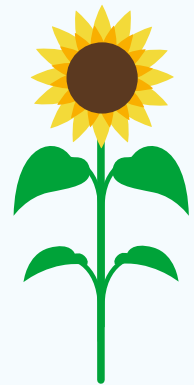
$$18 + 19 + 26 + 7$$

$$24 + 45 + 1$$

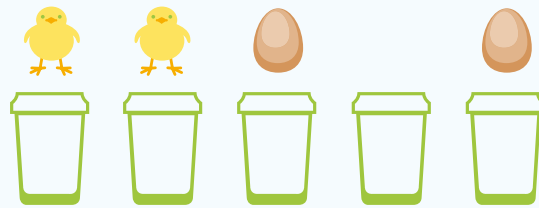
$$45 + 1 + 2 + 6 + 7 + 9$$

$$9 + 2 + 52 + 7$$

$$1 + 2 + 6 + 7 + 8 + 9 + 10 + 11 + 16$$

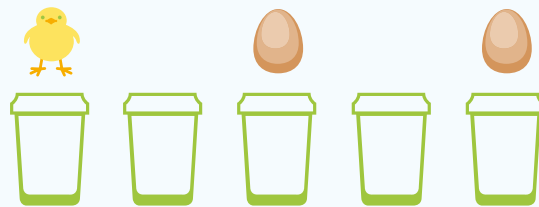


Puzzle 3 – Chick or Egg-sit



Is it easier or harder to pick a chick rather than an egg in this version?

Neither, it is equally easy as you have a two in five chance of guessing a chick and an egg.

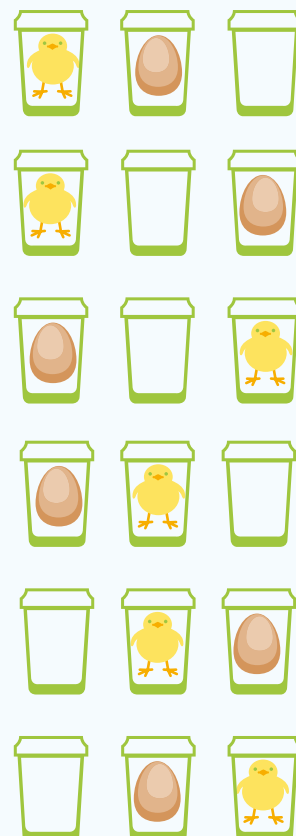


Is it easier or harder to pick a chick rather than an egg in this version?

it is harder to get a chick with this one as there is a one in five chance of guessing correctly.

List or draw as many different ways as possible that the cups could be arranged.

How many are there altogether?



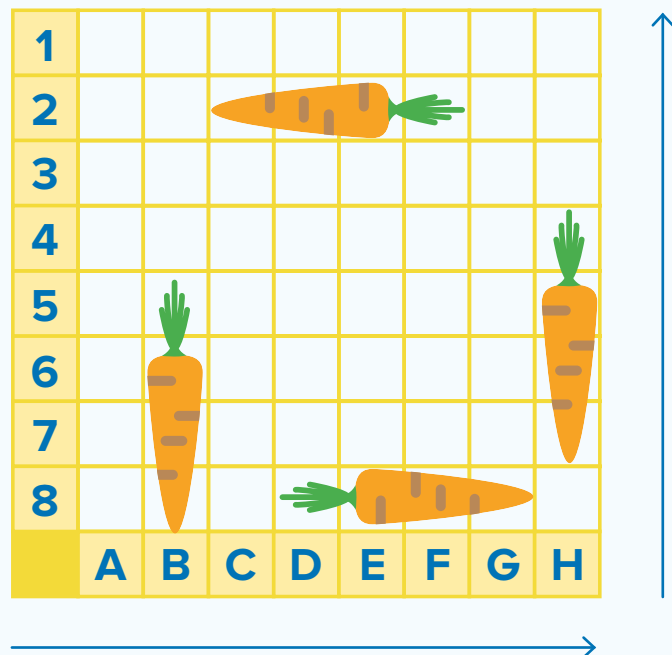
There are six altogether!



Puzzle 4 – Allotment Vegetable Grab

Just remember we read across and then up -> horizontal then vertical. In this case – the letter and then the number.

Hope you enjoyed this! It's a fun way of using numbers and grids and solving problems.



Created by the **The Scottish Mathematical Council** for the **Scottish Government**.

Solutions and workings will be available at blogs.gov.scot/making-maths-count from 10 April 2020.

Parents and carers

Please check out Parentzone Scotland www.education.gov.scot/parentzone and Parent Club www.parentclub.scot for more ways to enjoy numeracy and maths.

What you can do as a parent or carer

- Play board games! Games can involve a lot of maths: this could be counting squares, looking for sequences, moving in different directions, exploring probability by rolling dice or being dealt a card, and following logic and rules.
- Play puzzles and puzzle-like games. Examples include Noughts and Crosses, Guess Who?, Sudoku, Dominoes, Battleships and Draughts. These involve strategic thinking, problem solving, and planning, as well as lots of the skills mentioned above.
- Include children in activities that use maths. For instance cooking often asks for lots of quantities and measuring as well as shapes, times and temperatures. Shopping involves prices, counting money and checking dates (the expiry date).
- Estimate all sorts of things together: “I wonder how many steps there are here?”
- Plan journeys together, look at maps, timetables, and talk about distances.
- Talk about maths in a positive way – that way your child will too!