

Maths - Year 4

Pattern and Algebra 6: Solving problems and puzzles systematically

Key Vocabulary

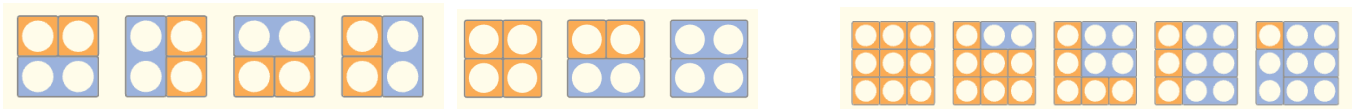
Possibility	The chance of something happening.
Rotate	Turn.
Systematically	Working step by step to solve a problem.

Mathematical Skills

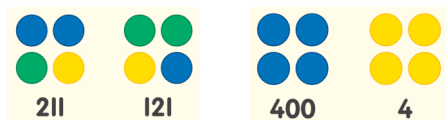
- Plan how to organise an investigation.
- Follow the same rules to investigate similar problems.
- Explain the systematic approach they have followed to find all possibilities.
- Keep systematic records of possibilities tried and tested.
- Solve problems by eliminating possibilities.

Mathematical Methods

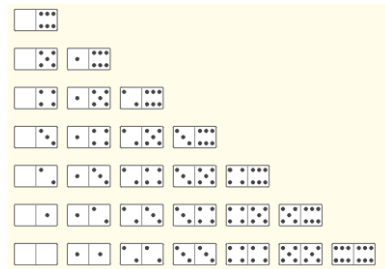
- Working systematically to find all the possibilities e.g. different possible ways to represent 2×2 , 3×3 .



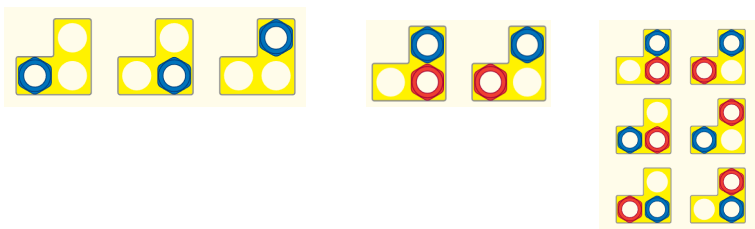
- Finding all the possible scores e.g. if blue counters are worth 100 points, green 10 and yellow 1.



- Finding the missing piece.




- Breaking a secret code by finding all the possibilities e.g. the different possibilities for a 3 button key pad.



- Solving a problem by eliminating possibilities.

Can you..?

- Find all the combinations of odd Numicon Shapes that would make a 3 x 3 square?
- Rani scores 1101. What counters could he have picked?

Counter values			
 = 1	 = 10	 = 100	 = 1000

- Molly has to press two different keys to open the safe. Find the possibilities.

