

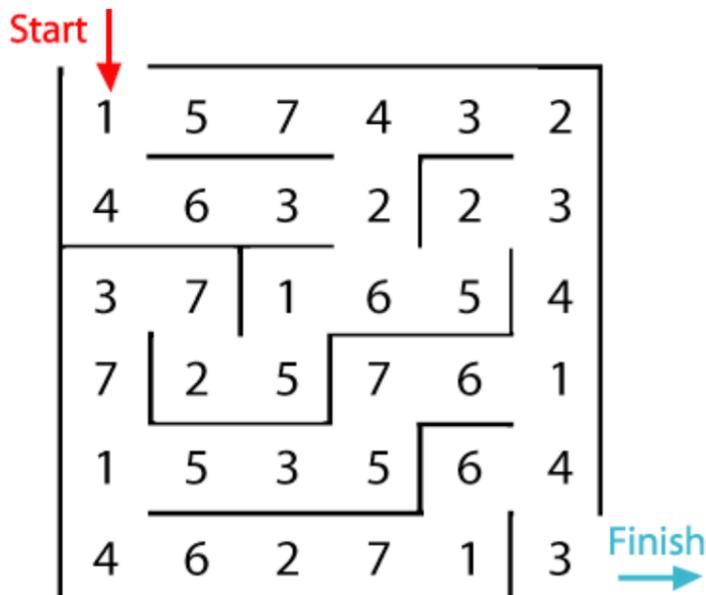
Year 2 Task:

Objective: Solve problems with addition, applying their increasing knowledge of mental methods.

This problem is based on Maze 100 from Nrich:

<https://nrich.maths.org/91/index>

In this maze there are numbers in each of the cells. You go through adding all the numbers that you pass. You may not go through any cell more than once.



Find different pathways through the maze and add up your total each time. Remember to use your number bonds to add mentally. You can use jottings so that you don't lose count!

What is the lowest total you can make?

What is the highest?

Can you make exactly 100?

Worked example:

Use the solutions on Nrich to see the various pathways that you could have taken.

<https://nrich.maths.org/91/solution>

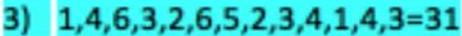
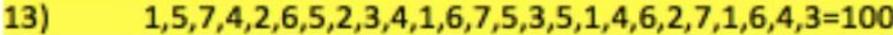
We attempted the maze 100 challenge and here our results.

First we found all the possible routes through the maze and there were 15.

 = Smallest possible answer.

 = largest possible answer

 = 100 answer

- 1)  1,4,6,3,2,6,1,5,2,7,3,7,1,4,6,2,7,1,6,4,3=108
- 2) 1,4,6,3,2,6,1,5,2,7,3,7,1,5,3,5,7,6,1,4,3=76
- 3)  1,4,6,3,2,6,5,2,3,4,1,4,3=31
- 4) 1,4,6,3,2,4,3,2,3,4,1,4,3=67
- 5) 1,4,6,3,2,4,3,2,3,2,5,6,1,5,2,7,3,7,1,4,6,2,7,1,6,4,3=99
- 6) 1,4,6,3,2,4,3,2,3,2,5,6,1,5,2,7,3,7,1,5,3,5,7,1,4,3=101
- 7) 1,4,6,3,2,6,5,2,3,4,1,6,7,5,3,5,1,4,6,2,7,1,6,4,3=97
- 8) 1,5,7,4,3,2,3,4,1,4,3=73
- 9) 1,5,7,4,3,2,3,2,5,6,1,5,2,7,3,7,1,4,6,2,7,1,6,4,3=97
- 10) 1,5,7,4,3,2,3,2,5,6,1,5,2,7,3,7,1,5,3,5,7,6,1,4,3=98
- 11) 1,5,7,4,3,2,3,4,1,6,7,5,3,5,1,4,6,2,7,1,6,4,3=90
- 12) 1,5,7,4,2,6,5,2,3,4,1,4,3=47
- 13)  1,5,7,4,2,6,5,2,3,4,1,6,7,5,3,5,1,4,6,2,7,1,6,4,3=100
- 14) 1,5,7,4,2,6,1,5,2,7,3,7,1,4,6,2,7,1,6,4,3=84
- 15) 1,5,7,4,2,6,1,5,2,7,3,7,1,5,3,5,7,6,1,4,3=85

Variation:

- You could start from the “finish” point and subtract from 50. Can you get back to the start or do you need to start from a number higher than 50? (This will help you to practice mental subtraction using your number bonds!)
- You could set different start and finish points.
- You could copy a blank version of the maze and put in your own numbers.