

Discussion Problems

Step 4: Numbers to 100,000

National Curriculum Objectives:

Mathematics Year 5: (5N2) [Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit](#)

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

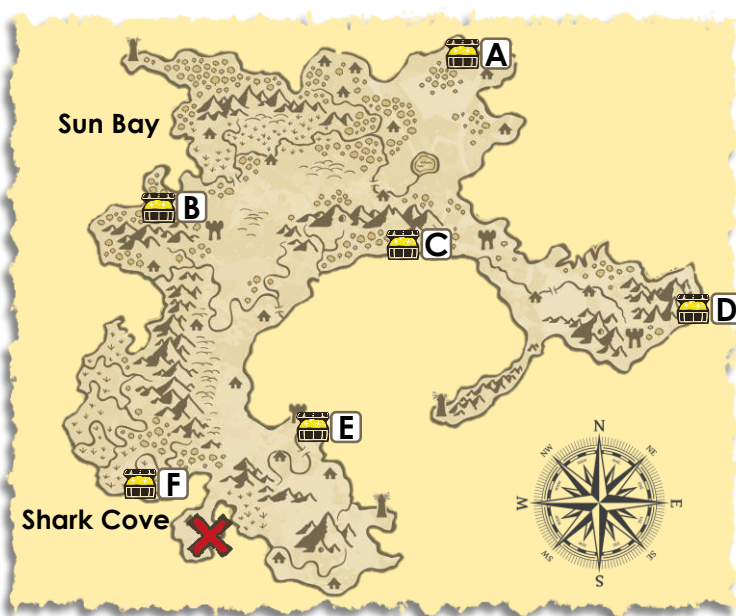
More [Year 5 Place Value](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Numbers to 100,000

1. No Beard has hidden some treasure on the island. She has recorded the number of steps taken to reach each piece of treasure on the place value charts below to help her find them again. Starting from her landing point (marked with a cross), which piece of treasure could each chart represent?

10,000	1,000	100	10	1
	●●●●●	●●●		
10,000	1,000	100	10	1
●●			●	
10,000	1,000	100	10	1
●	●●●	●●		
10,000	1,000	100	10	1
●		●	●●●	
10,000	1,000	100	10	1
	●●●●	●●		



One treasure chest doesn't have a grid. Complete the place grid to represent it.

10,000	1,000	100	10	1

DP

2. Tina is playing a game against Robo where they have to place digit cards to make 5-digit numbers. Explore all the possible ways Tina could win each round using the digits available for both players.



Tina

Largest even number wins

8 , 5 2

4 2 1 9 6

8 , 8 9



Robo

Smallest odd number wins

7 3

7 5 9 3 1

1 9 9

Closest to 50,000

3 , 5

2 5 7 6 8

, 5 8 1

Furthest from 45,00

2 , 7 5 1

9 3 4 7 2

6 9

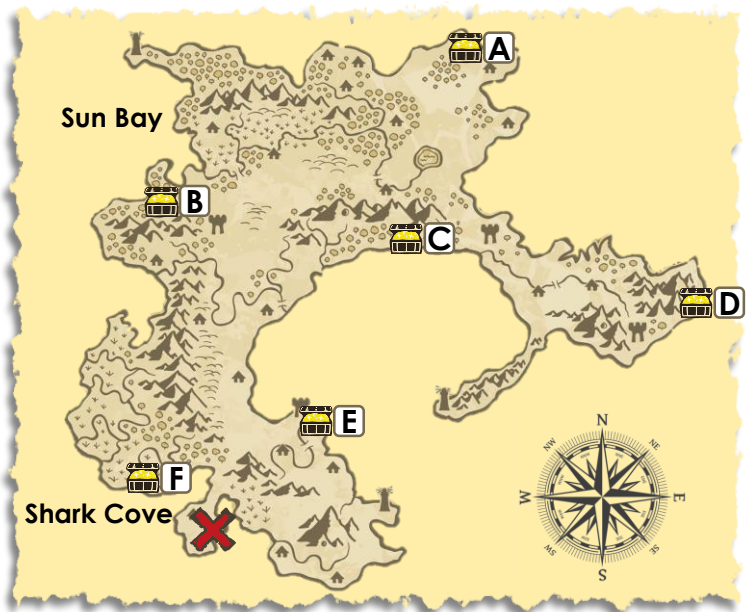
DP

Numbers to 100,000

1. No Beard has hidden some treasure on the island. She has recorded the number of steps taken to reach each piece of treasure on the place value charts below to help her find them again. Starting from her landing point (marked with a cross), which piece of treasure could each chart represent?

Various answers, for example:

	10,000	1,000	100	10	1
B		●●●●●	●●●		
	10,000	1,000	100	10	1
A	●●			●	
	10,000	1,000	100	10	1
D	●	●●●	●●		
	10,000	1,000	100	10	1
C	●		●	●●●	
	10,000	1,000	100	10	1
E		●●●●	●●		



One treasure chest doesn't have a grid. Complete the place grid to represent it.

	10,000	1,000	100	10	1
F		●●	●●	●	

2. Tina is playing a game against Robo where they have to place digit cards to make 5-digit numbers. Explore all the possible ways Tina could win each round using the digits available for both players.

Various answers, for example:



Tina

Largest even number wins

8 9, 5 6 2 4 2 1 9 6 8 1, 8 9 2



Robo

Smallest odd number wins

1 7, 3 3 5 7 5 9 3 1 1 9, 9 7 9

Closest to 50,000

3 8, 5 7 6 2 5 7 6 8 2 5, 5 8 1

Furthest from 45,00

2 2, 7 5 1 9 3 4 7 2 6 3, 7 9 9