



Task 1 – Possibilities and Totals

a. What is the **largest total** that can be made with **2 dice**, with **3 dice** and with **4 dice**?

2 dice: 12, 3 dice: 18, 4 dice: 24



b. What is the **smallest total** that can be made with **2 dice**, with **3 dice** and with **4 dice**?

2 dice: 2 3 dice: 3, 4 dice: 4

c. What are **all the possibilities** you can get when **rolling 2 dice**? First **estimate** how many possibilities do you think are there.

You can copy and fill-in a table below to help you out.

I created an organized list/table so that I do not miss any results/combinations.

1 st 	2 nd 	Total
1	1	2
1	2	3
1	3	4
1	4	5
1	5	6
1	6	7
2	1	3
2	2	4
2	3	5
2	4	6
2	5	7
2	6	8
3	1	4
3	2	5
3	3	6
3	4	7
3	5	8
3	6	9

Continued...

4	1	5
4	2	6
4	3	7
4	4	8
4	5	9
4	6	10
5	1	6
5	2	7
5	3	8
5	4	9
5	5	10
5	6	11
6	1	7
6	2	8
6	3	9
6	4	10
6	5	11
6	6	12

d. Look at the totals, and write at least one sentence about what you notice about these totals.

For example – I noticed that there is only one total of 2.

Others: - There are 2 totals of 3

There are 3 totals of 4

Task 2: Dice Investigation

Tally marks are a quick way of keeping a count in groups of five. One vertical line is made for each of the first four numbers; the fifth number is represented by a diagonal line across the previous four.

Answer	Tally	Frequency
1		0
2		1
3		3
4		5
5		6
6		9
7		14
8		10
9		5
10		3
11		2
12		2

Look carefully at your table and graph then answer the below questions:

a. Why do you think SuperM asked you to throw both dice **60 times**?

SuperM asked me to throw the dice 60 times so that I can have a more accurate result.

b. Which **total** was rolled **most often**? **7**

c. Which **total** was rolled **less often**? **2**

d. Why do you think these **totals** were rolled **most/less often**?

When rolling 2 dice I got 7 the most total rolled because there are 6 ways to obtain a total of 7 - (1,6), (2,5), (3,4), (4,3), (5,2), (6,1) - which is larger than the number of ways of obtaining any other given total (I noticed this from the above table) and I got 2 the least often as there is only 1 way how I can get 2 (1,1) (I noticed this from the above table)

e. Do you think you will get the **same results** if you rolled again the dice for another 60 times? Try it out again? Did you get the same results?

When I rolled the dice again I did not get exactly the same results but the number 7 was still the most total rolled.