

# Question 1

Ram Balaji S

May 2020

1. Continue the table from seven up to ten and check for yourself that Euler was correct! See if you can obtain some intuition for why the numbers of integer partitions of the two kinds are always equal. (Difficulty rating: 1 )

1 + 1 + 1 + 1 + 1 + 1 + 1	7
3 + 1 + 1 + 1 + 1	6 + 1
3 + 3 + 1	5 + 2
5 + 1 + 1	4 + 3
7	4 + 2 + 1
1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	8
3 + 1 + 1 + 1 + 1 + 1	7 + 1
3 + 3 + 1 + 1	6 + 2
5 + 1 + 1 + 1	5 + 3
5 + 3	5 + 3
7 + 1	5 + 2 + 1
1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	9
3 + 1 + 1 + 1 + 1 + 1 + 1	8 + 1
3 + 3 + 1 + 1 + 1	7 + 2
3 + 3 + 3	6 + 3
5 + 1 + 1 + 1 + 1	6 + 2 + 1
5 + 3 + 1	5 + 4
7 + 1 + 1	5 + 3 + 1
9	4 + 3 + 2
1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	10
3 + 1 + 1 + 1 + 1 + 1 + 1 + 1	9 + 1
3 + 3 + 1 + 1 + 1 + 1	8 + 2
3 + 3 + 3 + 1	7 + 3
5 + 1 + 1 + 1 + 1 + 1	7 + 2 + 1
5 + 3 + 1 + 1	6 + 4
5 + 5	6 + 3 + 1
7 + 1 + 1 + 1	5 + 4 + 1
7 + 3	5 + 3 + 2
9 + 1	4 + 3 + 2 + 1