

# Triple Sums

A triple is made up of three integers. For example, (1 , 2 , 3) is a triple.

The order is important so (1 , 2 , 3) and (2 , 1 , 3) are counted as different triples.

Triples can contain the same integer more than once, so (2 , 2 , 2) is a triple.

We find the sum of a triple by adding the three integers together, so the sum of the triples above are all 6.

$$1 + 2 + 3 = 2 + 1 + 3 = 2 + 2 + 2 = \underline{6}$$

How many triples are there with a sum of 6?

How many triples are there with a sum of 7?

Can you find a formula linking the sum with the number of triples?

Can you explain why your formula works?

How many triples are there with a sum of 100?

