

## It All Adds Up

What to do: Place the balls in the holes in the circular base so that, the 3 numbers along each diameter line add up to the same total.

## HOW IT WORKS


2. There are three ways of doing this, removing either the lowest number, the highest os the middle value ( 1,9 or 5 ). This leaves it possible to have a run of four small numbers which can be paired with four large ones.
For example, if 1 is put in the centre (above), this leaves the numbers $2,3,4$ and 5 which can be paired with $9,8,7$ and 6 across the circle, to make a total of 12 across each diameter.

1. There are eight depressions in the tray round the outside of the circle and one in the middle, so there are four diameters outlined in red across the circle. So the numbers 1 to 9 , with one removed to go into the middle, have to be divided up into four pairs that add up to the same total.

