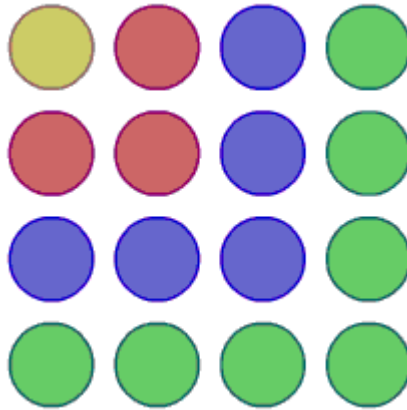


The diagram shows that $1 + 3 + 5 + 7 = 16$.



What is the sum of the first 30 odd numbers? **900**

What is the sum of the first 60 odd numbers? **3600**

Can you describe a method for working these out quickly? **The formula $\text{Sum} = N^2$**

Can you make 3249 by adding odd numbers in this way? **Yes, by summing the first 57 odd numbers.**

What is the value of:

- $1 + 3 + \dots + 149 + 151 + 153?$ **5,929**
- $83 + 81 + \dots + 5 + 3 + 1?$ **1,764**
- $51 + 53 + 55 + \dots + 149 + 151 + 153?$ **5,304**
- $2 + 4 + \dots + 150 + 152 + 154?$ **6,006**
- $2 + 6 + \dots + 298 + 302 + 306?$ **11,858**

Explain how you worked these out.

Identify the sequence

Find the number of terms (n)

Solve for n

Calculate the sum

So e.g. $2+6+10+\dots+298+302+306=11,858$