Daniel scored a total of 51 points using the dart board below. How many times did he hit the inner circle (the shaded circle)?

The dart board shows a large outer circle labeled 4 and a small shaded inner circle labeled 9.
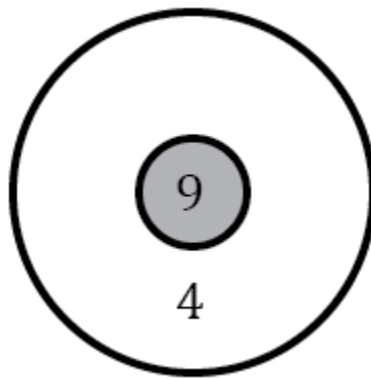
Solution: 3 times.

We will make a list of all possible scenarios, and then eliminate the ones that are not possible.

Scenario	Check Possibilities		
the number of times the dart hit the inner circle	points earned from the inner circle	points earned from the outer circle	
0	0	51	not possible
1	9	42	not possible
2	18	33	not possible
3	**27**	**24**	**possible**
4	36	15	not possible
5	45	6	not possible
6	54		not possible