In the void setup we will initialize a function which takes in the total steps.

Then we will use a recursion and pass then a parameter that would be the distance to be covered. And then we will say:-

If no distance is covered then return 0.

Else we use a Boolean and say that the power he uses is false.

If he takes the first step which is $\frac{1}{2}$ meter then his power is true.

If his power is true then the distance covered is half of distance covered.

Else the distance covered would be distance covered -1.

Then return 1+ total steps (distance to be covered).