The snake that grows long

In a forest there is a snake named James.

James got a special power, every day can either add 1 centimeter to his current body length or he can double his current length (current length x2).

James was born “starting Length” centimeter long, and now he is “current length” centimeter long.

What is the minimum numbers of days that have passed since James was born until he got to his current length?

Notice

If you will just say that James doubled his length every day you may pass his current length, you need to find the exact day that James got to his current length

Solution is in the next page

Solution

Define a “counter”, “current length” and “starting length” variables, with counter = 0;

1) If current length >= starting length x 2 check if current Length is even, if yes divide it by 2 and add 1 to counter, else subtract 1 from current length and add 1 to counter

   Replete 1 again

2) If 1 current length < starting length x 2 add (current length – starting length) to counter

And now counter is the answer.

```
function howManyDaysPassed() {
    let currentLength = 180, startingLength = 10, counter = 0;

    while (currentLength >= startingLength * 2) {

        if (currentLength % 2 == 0) {
            currentLength = currentLength / 2;
            counter = counter + 1;
        } else {
            currentLength = currentLength - 1;
            counter = counter + 1;
        }
    }
    counter = counter + (currentLength - startingLength);
}
```