k will represent the number of levels.

$$\frac{n}{2^k} \leq 1$$

$$n \leq 2^k$$

$$\log_2 n \leq k$$

For each level of k, hello will be printed 2^k times.

$$\sum_{i=0}^{\log_2 n} 2^i \quad \text{Geometric series}$$

$$= \frac{1 - 2^{\log_2 n + 1}}{1-2}$$

$$= \frac{1 - (2^{\log_2 n})(2)}{-1}$$

$$= \frac{1 - (2n)}{-1}$$

$$= -1 + 2n$$

$$\boxed{= 2n - 1}$$

"hello" will be printed $\underline{2n-1}$ times.