

Imagine Pocket Money:

Option 1: \$100 everyday: to figure out how much money each person receives is relatively easy, as the same amount of money is given everyday. This means we can use an easier equation to find the cumulative amount:  $100 \times$  number of days from the beginning of the month.

Option 2:

As we start off with \$30 on the first day and increasingly get \$5 everyday, we can tell how much money we are going to get.

As an example :

$$\text{Day 1 : } \$30 : \$25 + \$5 = 5 \times 1$$

$$\text{Day 2 : } \$35 : \$25 + \$10 = 5 \times 2$$

$$\text{Day 3 : } \$40 : \$25 + \$15 = 5 \times 3$$

$$\text{Day 4 : } \$45 : \$25 + \$20 = 5 \times 4$$

$$\text{Day 5 : } \$50 : \$25 + \$25 = 5 \times 5$$

From this we can tell that the equation will be:  $25 + 5n$ , to get the cumulative amount.

Option 3:

By doubling the previous value and adding it to the total value, we found the cumulative total.

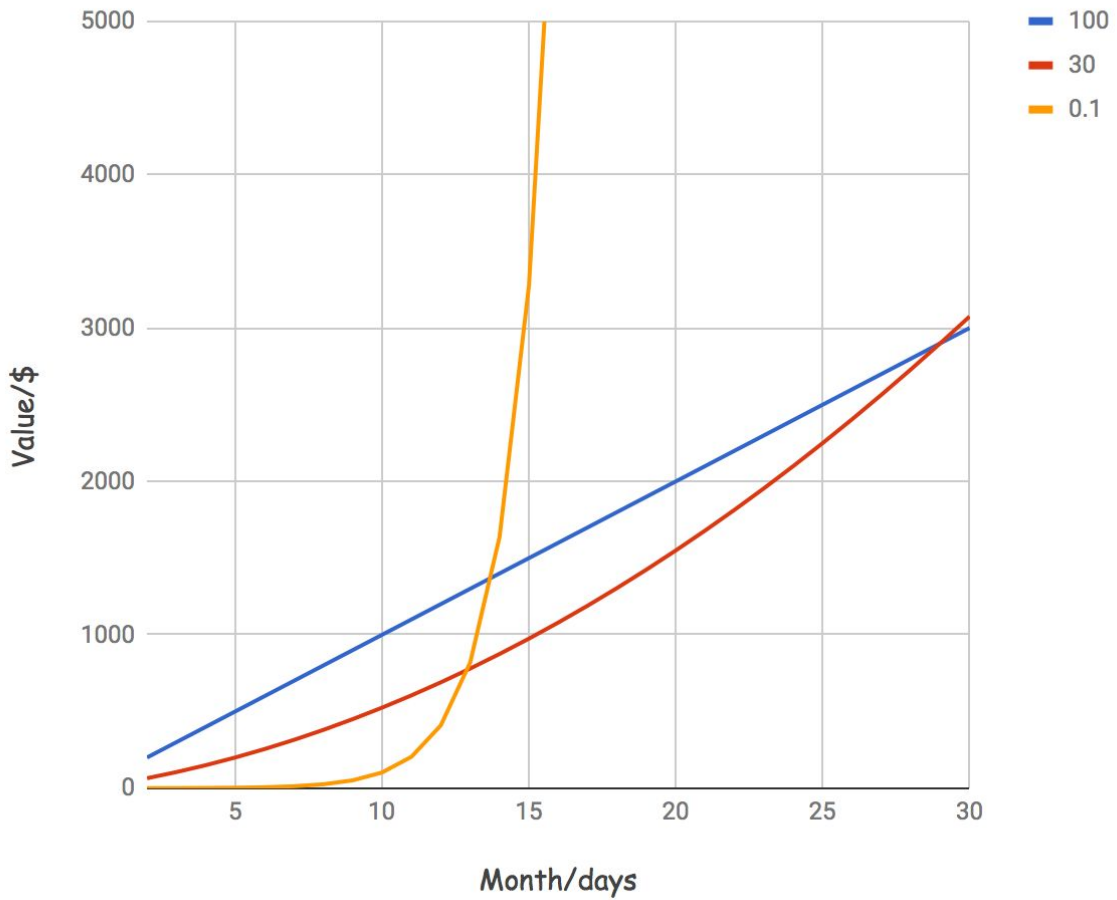
$$\text{Day 1: } \$0.1$$

$$\text{Day 2: } \$0.1 \times 2 + \$0.1$$

$$\text{Day 3: } 2(\$0.1 \times 2) + \$0.1 \times 2 + \$0.1$$

From this we can tell that the equation will be:  $2^{n+1} - 1$

Graph comparing pocket money values



We plotted a graph using the data we calculated. It clearly shows that option 3 is most effective.