

Answer on Question 37363 - Math - Algebra

In the first option, you will paid \$ 0.01 for the first day, \$ 0.02 for the second day, \$ 0.04 for the third day, and so on for 30 days.

So we can calculate the geometric progression.

Sum that you have to pay is:

$$S_n = \frac{b_1 \times (q^n - 1)}{q - 1}$$

$$b_1 = 0.01$$

$$q = \frac{b_3}{b_2} = \frac{b_2}{b_1} = \frac{0.04}{0.02} = \frac{0.02}{0.01} = 2$$

$n = 30$ (because September has 30 days)

$$S_n = \frac{b_1 \times (q^n - 1)}{q - 1} = \frac{0.01 \times (2^{30} - 1)}{2 - 1} = 10737418.23 \text{ \$}$$

In this option you must paid 10,737,418.23 \$

In other option you must paid only 100,000 \$

Therefore, I would take a second opinion because it is more profitable.