

AC:NH money tree returns

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Case	Bells buried	Bells on tree	% chances
1	$x \leq 1\ 000$	$3 \times 1\ 000$	100%
2	$x = [1\ 001\ 9\ 999]$	$3 \times x$	30%
2		3 000	70%
3	$x \geq 10\ 000$	$3 \times x$	30%
3		30 000	70%

Table 1. Animal Crossing: New Horizons money tree table. Taken from https://nookipedia.com/wiki/Money_tree on 2024-02-08.

$$E_3(x) = [\text{bells returned}] - [\text{bells planted}]$$

$$[(0.30) \cdot (3x) + (0.70) \cdot (3 \cdot 10\ 000)] - [x] \quad (1)$$

$$= 0.9x + 21\ 000 - x$$

$$E_3(x) = 21\ 000 - 0.1x \quad (2)$$

x	$E_3(x)$
10 000	20 000
20 000	19 000
30 000	18 000
40 000	17 000
50 000	16 000
60 000	15 000
70 000	14 000
80 000	13 000
90 000	12 000
99 000	11 100

Table 2. The expected return from planting $x \geq 10\ 000$ bells in a AC:NH money tree according to equation 2.