



Assignment 2

Powers of 2: Calculate a target

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Guidelines for implementing this activity

- Get a copy of a chess board, or make one beforehand. Discuss how many blocks make up the board.
- Start the lesson by placing R1 on the first block and then R2 on the second block. Continue until the class picks up the pattern and then let learners carry on in their groups to complete the activity.

Suggested answers

	Chess square	1	2	3	4	5	6	7	8
	Rand	1	2	4	8	16	32	64	128

- $y = 2^{x-1}$ where y is the amount of money Daniel has to put on any square and x is the number of the chess square.
- $y = 2^{12-1} = 2^{11} = 2\,048$
- $y = 2^{64-1} = 2^{63} = 9,22 \times 10^{18} \text{ c} = 9223372087000000000 \text{ c}$. This is a very large amount of money!
- Learners will have their own responses, e.g. it is always a good idea to save money and possibly David should set a target of the amount of money that he needs and then calculate how many days it will take to save that amount.