



30 DAYS OF CODE (PYTHON TRACK)

Day 5 - Faithful Numbers

Faithful numbers are numbers that can be written as the sum of distinct powers of 7. e.g. $2457 = 7^1 + 7^2 + 7^4$, $1 = 7^0$. The first 10 faithful numbers are 1, 7, 8, 49, 50, 56, 57, 343, 344, 350.

Write a function named **faithful** that **returns the nth faithful number** by taking the value of *n* as its parameter.

Hint: List out the first 10 (or more) faithful numbers and write them in the form $2457 = 7^1 + 7^2 + 7^4$, $1 = 7^0$. Then, look for a pattern.