**6 kyu**

**#1 Sequences: Pure Even Digit Perfect Squares (P.E.D.P.S)**

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Python

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The integer 64 is the first integer that has all of its digits even and furthermore, is a perfect square.

The second one is 400 and the third one 484.

Give the numbers of this sequence that are in the range [a,b](both values inclusive)

Examples:

even\_digit\_squares(100, 1000) == [400, 484] # the output should be sorted.

even\_digit\_squares(1000, 4000) == []

Features of the random tests for even\_digit\_squares(a, b)

number of Tests = 167

maximum value for a = 1e10

maximum value for b = 1e12

You do not have to check the entries, a and b always positive integers and a < b

Happy coding!!

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**import** math

**def** nextPerfectSquare(N):

    nextN = math.floor(math.sqrt(N)) + 1

**return** nextN \* nextN

**def** TodosPares( n):

**while** (n > 0):

        d = n % 10

**if**(d % 2 != 0):

**return** False

        n = n // 10

**return** True

**def** even\_digit\_squares(a, b):

    ans = []

    i = a

**while**(i <= b + 1):

        i = nextPerfectSquare(i)

**if**(TodosPares(i)):

            ans.append(i)

**return** ans