Problem Solving - 2 - Iterative Statements, Loops

Wednesday, 27 July 2022 8:09 PM

· Split String

Q I/P 321

↳ 3 + 2 + 1 ⇒ 6 O/P

logic

Q how to fetch ind. digits

I/P

sum = 0 X 3 6

sum = sum + rem.

= 0 + 1

= 1

= 1 + 2

= 3

= 3 + 3

= 6

321 ⇒ 1

321 % 10 } 1

321 / 10 ⇒ 32.1 ⇒ 32

32 % 10 ⇒ 2

32 / 10 ⇒ 3

3 % 10 ⇒ 3

3 / 10 ⇒ 0 Stopping Condition

32 % 10 ⇒ 2

Q Armstrong no.

153 ⇒ $1^3 + 5^3 + 3^3$ ⇒ 1 + 125 + 27

= 153

1634 ⇒ 1^4 6^4 3^4 4^4

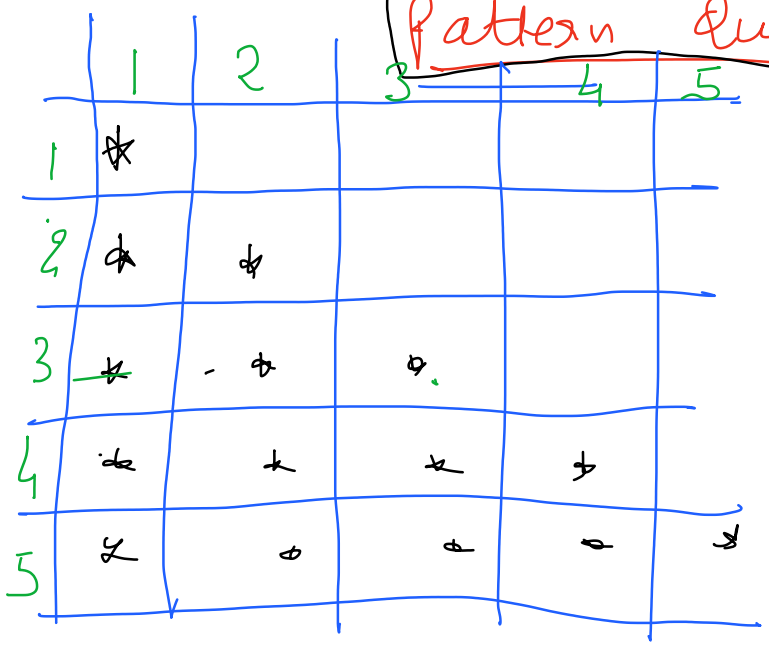
= 1 + 1296 + 81 + 256

= 1634

Logic ⇒ 1. fetch ind. digit }

2. no. of digits }

Pattern Question



gth

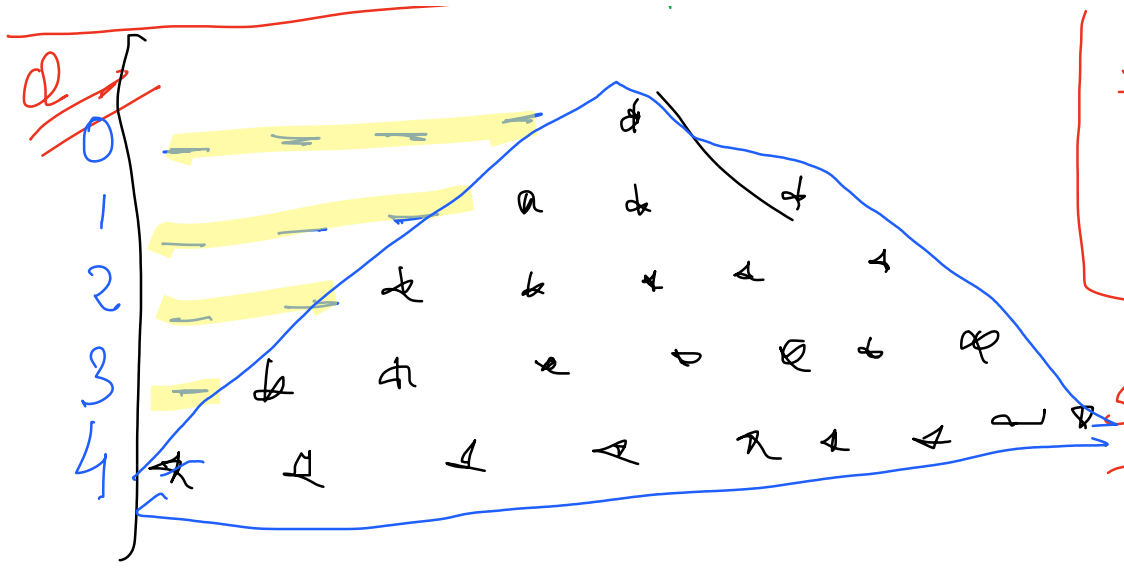
print

<=

row = 3 }

col = 3 }

while col <= row } }



logic

rows & cols.

n=4

Row no.	Spaces
0	4
1	3
2	2
3	1
4	0

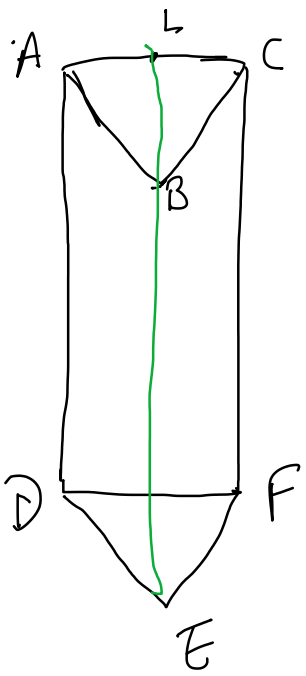
Row no.	Stars
0	1
1	3
2	5
3	7
4	9

Row + Space = n

Space = n - rows

2(Row no.) + 1 = S

6-10



area of $\Delta ABC = \frac{1}{2}$ base * height

$= \frac{1}{2} AC * LB$

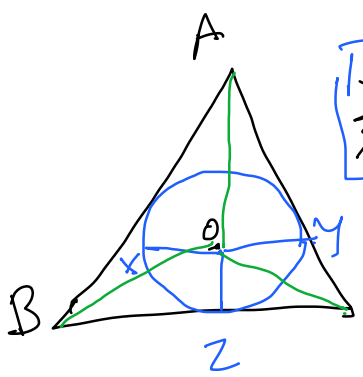
Height of Prism: BE

Volume: base * height

$= \frac{1}{2}(AC * LB) * BE$

Q Given volume of prism
Perimeter of Δ base prism
radius of inner circle
} asked calc. height of prism.

$$height = \frac{volume}{base} = \frac{volume}{area\ of\ \Delta ABC}$$



Inner radius = OX = OY = OZ

Perimeter = AB + BC + CA

area of ΔABC = area of ΔAOB +
area of ΔAOC +
area of Δ B...

$= \frac{1}{2} AB \times OX +$

$\frac{1}{2} AC \times OY +$

$\frac{1}{2} BC \times OZ$

$= \frac{1}{2} * r (AB + AC + BC)$

$= \frac{1}{2} * r * \text{Perimeter}$

Area of $\Delta ABC = \frac{1}{2} * \text{inner radius} * \text{Perimeter}$ }

Height = Volume / area

Q. Bob } =>

bricks => 24 x100 m, 12 x100 m, 8 x100 cm } m

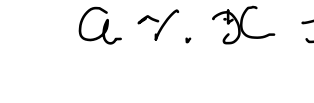
Dimensions of wall => L = 24 m, H = 8 m, T = 0.6 m

5 mins.

10:31

How many bricks?

no. of bricks = volume of wall / volume of bricks x $(100)^3$ x 0.85 }



100%

85% bricks

15% other materia

LCM :=

2 | 12 16 }

2 | 6 8

3 4

5 mins

2 * 2 * 3 * 4 => 48

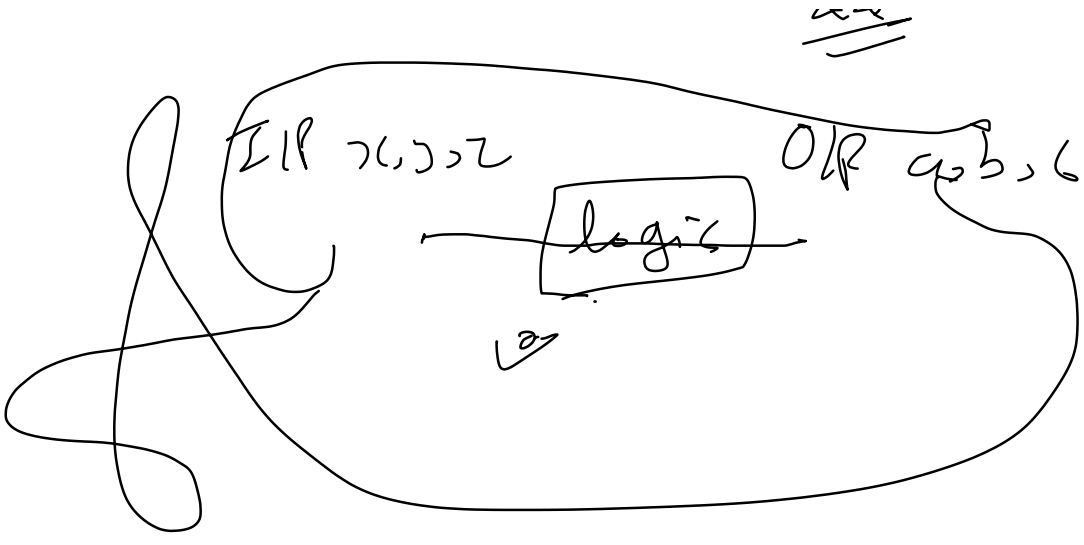
2 | 2 4 }

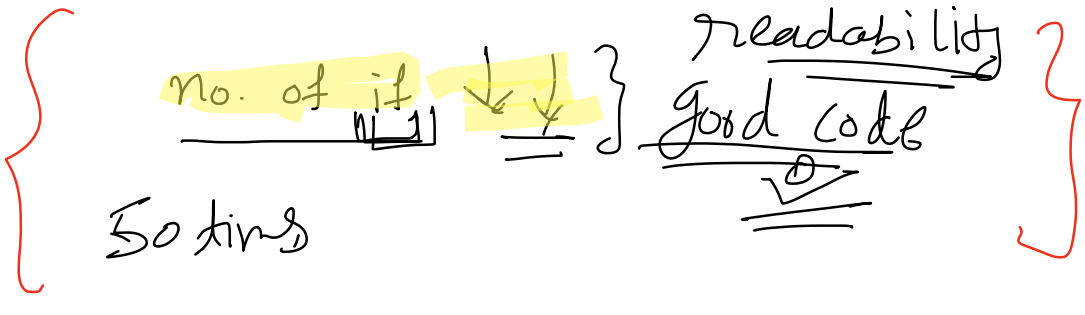
1 2

=> 2 * 2 => 4

1) LCM >= max(a, b)

2) a % x == 0 } b % x == 0 }


I/P
O/P
logic


no. of if
readability
Good code
50 lines