

0 1 2 3

3 7 8 2

i=0:- (3 < 5)

$$S = 3 + 7 = 10$$

$$i = 1, c = 0 + 1 = 1$$

(10 $\not\leq$ 5 $\&$ 8 $\not\leq$ 5)

i=1:- (8 $\not\leq$ 5 $\&$ 2 $\not\leq$ 5)

(2 < 5)

$$S = 8 + 2 = 10$$

$$i = 3$$

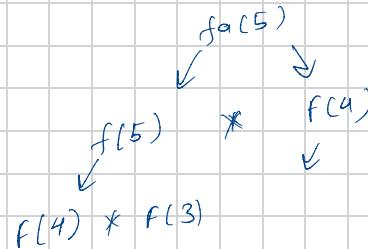
$$c = 2$$

{10 $\not\leq$ 5 $\&$ 2 < b}

$$5 \times 4 \times 3 \times 2 \times 1$$

↓ ↓

n × n-1



so $\sum_{n=1}^{\infty} f(n) * f(n-1)$

$f(5) \rightarrow 5 \times 4$

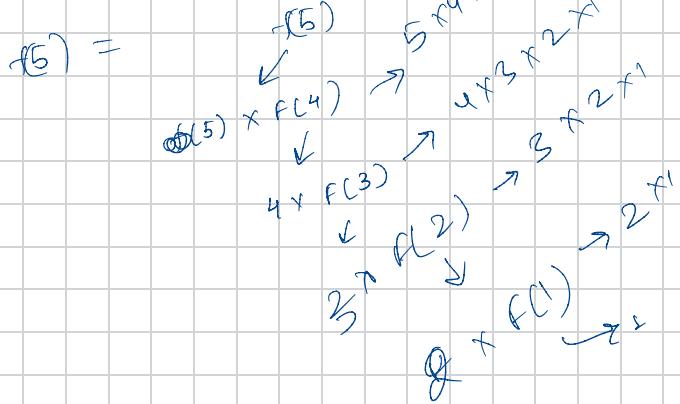
$f(4) \rightarrow 30 \times 31$

$f(3) \rightarrow 6 \times 5$

$f(2) \rightarrow 2 \times 3 = 6$

$f(1) \rightarrow 1 \times 2 = 2$

$$f(N) = N \times f(N-1)$$



$$5 \rightarrow 5 + 4 + 3 + 2 + 1$$

$5 + \text{sum}$

$$f(N) = \Theta(N + f(N-1))$$

$$1 + 2 + 3 + 4 + 5$$

$1 +$

$$f(N) = \Theta(f(N+1))$$

if ($i \leq 4$)
return:
 $i=10$
 $i \neq i$

$$\frac{41}{10} = 4.1 = 4$$

$$\frac{278 \cdot 3}{1000}$$

$$f(N) = N/i + f(N)$$

$$f(2783) \rightarrow$$

```

graph TD
    f2783[f(2783)] --> f2783_1[f(2783)]
    f2783_1 --> f273[f(273)]
    f273 --> f27[f(27)]
    f27 --> f0[f(0)]
    f0 --> 0[0]
    style f2783 fill:none,stroke:none
    style f2783_1 fill:none,stroke:none
    style f273 fill:none,stroke:none
    style f27 fill:none,stroke:none
    style f0 fill:none,stroke:none
    style 0 fill:none,stroke:none
    
```

$$F(2783)$$



$$3 + F(2783)$$



$$3 + F(110) + n/10$$

$$F(n) = F(110) + \frac{n}{10}$$

$$\frac{3+2}{10} = 34$$

$$\begin{matrix} 1 & 5 \\ 8 & \times & 5 \\ 2 & \end{matrix}$$

$$F(2783)$$



$$F(2783) + 3 \rightarrow \begin{matrix} 2 & + & 2 & + & 1 & + & 3 \end{matrix}$$



$$F(27) + 8 \rightarrow 2+7+8$$

$$F(2) + 7 \rightarrow 2+7$$

$$0 + 2 \rightarrow 2$$

$$2783 = \underbrace{3 \times 8 \times 7 \times 2}_{\text{L}}$$

$$n/10 \times n/10$$

$$F(n) = n/10 \times \frac{n}{10}$$

$n/10000$ $\rightarrow n/10$

$$n = \underline{\quad} \underline{\quad} \underline{7} \underline{8} \underline{3}$$

3 8 7 2

$$\left[\begin{array}{l} d = n/10 \\ r = r_2 \times 10 + d \\ n = n/10 \end{array} \right] \rightarrow 3872$$

$$f(n) = \underbrace{r_2 \times 10 + d}_{\text{d}} + f(n/10)$$

$$f(n) = \underbrace{10 * n/10}_{(n/10) \times f(\frac{n}{10})} + f(n/10)$$

$$f(n) = b \times 10000 + \underbrace{(b \times (n/10))}_{f(n)}$$

~~f(2783)~~

↓

$$10 * 3 + f(278) \rightarrow$$

↓

$$3 + f(278)$$

↓

$$80 + f(27)$$

↓

$$700 + f(2)$$

↓

$$2000 + f(0)$$

$$10 * 8 + f(27) \rightarrow$$

↓

$$10 * 7 + f(2) \rightarrow$$

↓

$$10 * 2 + f(0) \rightarrow$$

$$\begin{array}{r} \begin{array}{c} \downarrow \\ 1323 \end{array} \longrightarrow \begin{array}{c} \downarrow \\ 1353 \end{array} \\ 1233 \rightarrow \checkmark \quad 1335 \end{array}$$

$$\begin{array}{c} \begin{array}{c} \downarrow \\ 321 \end{array} \quad \begin{array}{c} \downarrow \\ 0123 \end{array} \\ \boxed{231} \quad \begin{array}{c} \downarrow \\ 3241 \end{array} \\ \textcircled{①} \quad \begin{array}{c} \downarrow \\ 2341 \end{array} \end{array} \rightarrow \times$$

$$\begin{array}{c} \textcircled{④} \\ \begin{array}{c} \downarrow \\ 1323 \end{array} \end{array} \rightarrow \textcircled{④} \neq \textcircled{②}$$

$$\begin{array}{c} \downarrow \\ 12\textcircled{③}3 \end{array}$$

$$\begin{array}{c} i \\ 1323 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 1323 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 1\textcircled{③}33 \end{array}$$

$$\boxed{c=2} \quad \boxed{1233} \rightarrow \text{no}$$

$$\begin{array}{c} \textcircled{③} \\ \textcircled{②} \end{array}$$

$$\begin{array}{c} i \\ 1323 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 13>23 \end{array}$$

$$\begin{array}{c} i \\ 1233 \end{array}$$

$$\begin{array}{c} \textcircled{②} \\ \textcircled{③} \end{array} \quad 1233$$

$$\begin{array}{c} i \\ 321 \\ \downarrow \\ 231 \\ \downarrow \\ 213 \end{array}$$

$$\begin{array}{c} i \\ 321 \end{array}$$

$$\begin{array}{c} \downarrow \\ 231 \end{array}$$

$$233$$

$$\begin{array}{c} i \\ 35789 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 35789 \end{array}$$

$$c=3 \quad 35789$$

$$\begin{array}{c} \downarrow \\ \textcircled{c=4} \quad 35789 \rightarrow \text{out} \end{array}$$

$$\begin{array}{c} i \\ 1323 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 13723 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=2 \quad 13\textcircled{③}3=3 \end{array}$$

$$\begin{array}{c} \textcircled{③} \\ 1233 \end{array}$$

$$\begin{array}{c} i \\ 321 \end{array}$$

$$\begin{array}{c} \downarrow \\ c=1 \quad 231 \end{array}$$

$$213$$

$$\textcircled{3} \quad \begin{array}{r} 13 \\ 12 \end{array} \begin{array}{r} 23 \\ 33 \end{array} \begin{array}{r} 45 \\ 40 \end{array} \quad c=1$$

$$1 \rightarrow 3 \quad 3 \rightarrow 1 \quad \textcircled{c=2}$$

$$(3-4) \rightarrow \textcircled{1} \quad x=\textcircled{2}$$

$$x \cdot 1 = 0 \quad \checkmark$$

$$5 \quad 2$$

$$(5-2) \rightarrow \textcircled{0} \quad x=\textcircled{1}$$

$$1 \cdot 2 = 1 \neq 0$$

$$3 \quad 5 \quad 7 \quad 8 \quad 9 \quad 2$$

$$\begin{array}{ccccccccc} & i & i & i & i & i & & & \\ 3 & \downarrow & 5 & \downarrow & 7 & \downarrow & 8 & \downarrow & 9 \\ \textcircled{3} & \textcircled{5} & \textcircled{7} & \textcircled{8} & \textcircled{2} & \textcircled{9} & \rightarrow & \textcircled{c=1} & \\ \hline & & & & & & & & \end{array}$$

$$\textcircled{5} \quad \textcircled{4}$$

$$|11 - 15| = \textcircled{4}$$

$$12 \quad 14$$

$$\boxed{13} \quad \boxed{13}$$

$$\textcircled{6} \quad |5-7| = \textcircled{1}$$

$$6 \quad 6$$

$$2 \quad 5$$

$$\begin{array}{r} 2 \quad 9 \\ 4 \quad 7 \\ \hline 6 \quad 5 \end{array} \rightarrow \begin{array}{l} 7, x=2 \\ 7 \cdot 1 \cdot x \neq 0 \end{array}$$

$$\begin{array}{r} 2 \quad 9 \\ 4 \quad 2 \\ \hline 6 \quad 5 \end{array} \rightarrow \begin{array}{l} 7, x=7 \\ 7 \cdot 1 \cdot x = 0 \end{array}$$

$$\textcircled{1}: -1 - 1 \cdot 1 \cdot x = 0$$

$$\textcircled{2}: -1 - 1 \cdot 1 \cdot x = 1 \quad \boxed{x = -1}$$

$$6 \quad 6$$

$$\begin{array}{r} 2 \cdot 5 \\ 5 \cdot 2 \end{array} \rightarrow \begin{array}{l} \textcircled{1}, x=\textcircled{3} \\ x \cdot 1 \cdot 1 = 0 \end{array}$$

$$\frac{G}{T} = \textcircled{6}$$

$$6 - 1 \cdot 7 \cdot \textcircled{X} \rightarrow \begin{array}{l} \textcircled{1}, \textcircled{X} \neq 7 \\ 6 \cdot 1 \cdot 1 = 0 \end{array}$$

$$6 \quad 2$$

$$5 \quad 3$$

$$4 \quad 3$$

$$6 \quad 4$$

$$7 \quad 5$$

$$3 \quad 6$$

$$6 \quad 7$$

$$1 \quad 8$$

$$6 \quad 9$$

$$1 \quad 10$$

$$(7-1) \rightarrow 6, x=4$$

$$6 \cdot 1 \cdot 4 \neq 0$$

$$(7-1) \rightarrow 6, x=6$$

$$6 \cdot 1 \cdot 6 \neq 0$$

$$x \cdot 1 \cdot 2^{x^0}$$

$$(15 - 8) \rightarrow 7, x=1$$

$$\begin{matrix} & & 9 \\ 14 & & \\ & 13 & 10 \\ & 12 & 11 \\ 11 & 12 \end{matrix} \times$$

$$7 \cdot 1 \cdot 0 = 0$$

$$(15 - 8) \rightarrow 7, x=2$$

$$7 \cdot 2^{x^0}$$

$$\begin{matrix} & & 10 \\ 13 & & \\ & 11 & \\ 11 & 12 \end{matrix} \times$$

$$a \geq b \rightarrow x \cdot S^{1,2} = 0$$

$$\begin{matrix} 15 & 11 & 1 \\ 13 & 13 & \\ 12 & 14 & \\ 11 & 15 & \end{matrix} \times$$

$$(15 - 8) \cdot 7 \cdot 3 = 3$$

$$\begin{matrix} & & 3 \\ 12 & & \\ a & & \end{matrix}$$

$$a \geq b \rightarrow S^{1,2} \neq 0$$

$$\begin{matrix} 15 - 13 & 1 & x=1 \\ 14 & 14 & \\ 13 & 15 & \end{matrix} \times$$

$$a \geq b \rightarrow S^{1,2} \neq 0$$

$$0 \rightarrow 0$$

$$0 \xrightarrow{+2} 2$$

$$0 \xrightarrow{+2} 2 \xrightarrow{+2} 4$$

$$0 \xrightarrow{+2} 2 \xrightarrow{-1} 1$$

$$0 \xrightarrow{+2} 2 \xrightarrow{+2} 4$$

$$0 \xrightarrow{+2} 2 \xrightarrow{+2} 4 \xrightarrow{-1} 3$$

$$0 \rightarrow 2 \rightarrow 4 \rightarrow 6$$

$$0 \rightarrow 2 \rightarrow 4 \rightarrow 6 \rightarrow 5$$

$$0 \rightarrow 2 \rightarrow 4 \rightarrow 6 \rightarrow 8$$

$$0 \rightarrow -1$$

$$0 \rightarrow -1 \rightarrow -2$$

$$0 \rightarrow -1 \rightarrow 1$$

$$0 \rightarrow -1 \rightarrow -2 \rightarrow -3$$

$$0 \rightarrow -1 \rightarrow -2 \rightarrow 0$$

$$0 \rightarrow -1 \rightarrow -2 \rightarrow -3$$

$$0 \rightarrow -1 \rightarrow -2 \rightarrow -3 \xrightarrow{-1} -4$$

$$0 \rightarrow -1 \rightarrow -2 \rightarrow -3 \xrightarrow{-1}$$

(4)

$$0, 1, 2, 3, 4, 1, 4, 1, 3, 6, 5, 8, -1, -2, 1, 1, -3, 1, 0 \\ 1, -3, 1, -4, 1, 1$$

⑪

⑫

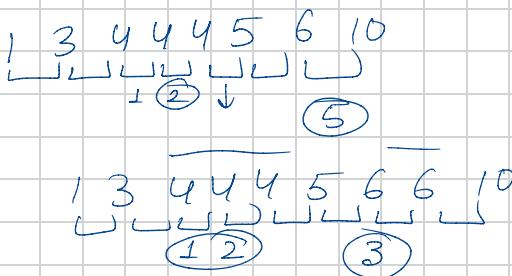
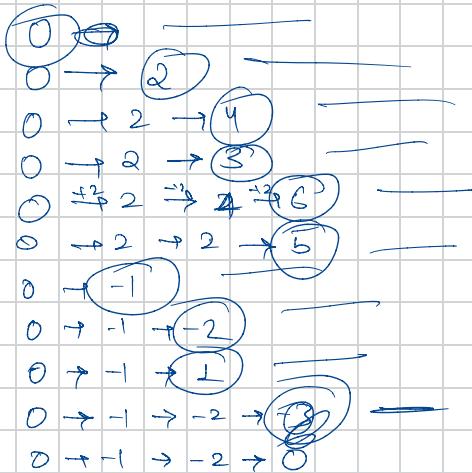
⑬

1, 3, 6, 1, 12

2 3 6
↓ ↓ ↓
1 2

1, 3, 7, 9, 1, 2
↓ ↓ ↓
2 7 2

③



0	1	2	3	4
1, 3	1, 6	1, 9	1, 12	

bacd

$b + S(acd)$
↓
 bcd

$S(cd)$
↓

$c + \{d\}$
↓
 cd

① ② ⑧ ④ ② ⑤ ⑧ ⑩
⑨ ④ ④ ⑥ ① ⑤ ⑨ ⑪

1 1 2 2 3 3 4 4 4 5 5 8 9 10 11
① ② ③ ⑦ ⑧ ⑥ ⑦

① ② ③ ② 3
① ②

⑦ + ⑧

$$x = 4$$

$$t_2 = 9$$

$$HCF = 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 1 \ 3$$

$\textcircled{5} \ \textcircled{6} \ \textcircled{7} \ \textcircled{8} \ \textcircled{9} \ \textcircled{10} \ \textcircled{1} \ \textcircled{3}$

$$\begin{array}{r} 1 \ 2 \ 3 \ 4 \ 5 \ 0 \ 0 \\ \textcircled{1} \ \textcircled{2} \ \textcircled{3} \ \textcircled{4} \ \textcircled{5} \ \textcircled{6} \ \textcircled{7} \\ 0 \ 0 \ 0 \ 0 + 2 \\ \textcircled{1} \ \textcircled{2} \ \textcircled{3} \ \textcircled{4} \ \textcircled{5} \ \textcircled{6} \ \textcircled{7} \\ 0 \ 0 \end{array}$$

$$\begin{array}{r} n \ x \\ 5 \ 4 \\ 2 \ 2 \ 4 \ 1 \ 1 \end{array}$$

$$i=0 : - \text{max} = 2$$

$$(2 > 0)$$

$$2 - 4 = -2$$

$$t_1 = +$$

$$i=0 : - \text{max} = 2$$

$$+1 = 2$$

$$i=2 : - \text{max} = 4$$

$$4 > 0$$

$$4 - 4 = 0$$

$$t_1 = 3$$

$$\begin{array}{r} 2 \ 2 \ 4 \ 1 \ 1 \\ \downarrow \quad \downarrow \ 1 \ 6 \ \downarrow \\ 1 \ 1 \ 3 \ 0 \ 0 \\ \downarrow \quad \downarrow \ 1 \ 1 \ 0 \\ 1 \ 0 \ 2 \ 0 \ 0 \\ \downarrow \quad \downarrow \\ 0 \ 1 \ 1 \ 0 \ 0 \end{array}$$

$$i=3 : - \text{max} = 4$$

$$+1 = 4$$

$$i=4 : - \text{max} = 4$$

$$t_1 = 5$$

$$5 \ 4$$

$$2 \ 2 \ 4 \ 1 \ 1$$

$$N \quad K$$


 \downarrow $\xrightarrow{\quad}$
 K_N G_K
 \downarrow
 X_K

$$M \left(\sum_{i=1}^n x_i^2 \right)$$

$$\frac{12+n}{4} = 4$$

$\Rightarrow n = 4$

$$\frac{18+n}{4} = 3$$

$\Rightarrow n = 12 - 18 \quad X$

$$\begin{aligned} \cancel{13+x} \\ \cancel{x} \\ \Rightarrow x &= (-) \\ x &= 4 \times V - \cancel{\{A[i]\}}^{>0} \downarrow \\ &\quad \swarrow \quad \textcircled{2} \\ &\quad \textcircled{1} \end{aligned}$$

$$\frac{a+6}{3} = \frac{12}{3} = \textcircled{A}$$

$$\frac{2+7+3+3n}{1} = A$$

$$\Rightarrow 3^{2x} = 9$$

$$= \frac{N \cdot (N+K)}{K} - \frac{KA}{K}$$

$$7+6+5+n = 4$$

$\Rightarrow n = 16 - 18 \rightarrow 0$

$$2x + 8 + 3 + 3x = 4$$

6

$$\Rightarrow 3x = 24 - 13$$

$$\Rightarrow x = \frac{11}{3}$$

$\begin{matrix} 0 \\ A \\ B \end{matrix}$

2 2 ✓

0110 1001

2 3 ✓

10101 01110

3 3 ✗

101010 101001

2 4 ✓

011110 101101

2 5 ✓

0111110 1011101

3 2 ✗

10001 00110

3 3 p

10101 0

3 4 ✓

0110110 ✓ 1100011

5 6 ✓

110000011 0111000110

5 5

00800 0111110

3 5

0 P

2 1 p
0 1 0 001

3 1 ∞
0001 1

3 2 ✗
10001 00110



4 2 ✓
100001 001100

4 3 p
100001 ✗ 0011100

2 5 ✓

011110 1011101

6 5 ✓

0101010101010
00011111000

$\begin{matrix} A \\ | \\ B \\ | \\ 1 \end{matrix}$

N K S
3 2 14

$$1 \ 3 \ 5 \ 7 \ 9 \rightarrow 25 \xrightarrow[1]{\textcircled{3}} 28 \xrightarrow[4]{\textcircled{4}}$$

$$1 \ 3 \ 5 \rightarrow 9 \xrightarrow[5]{\textcircled{5}} 14 \xrightarrow[2]{\textcircled{2}}$$

$$1 \ 3 \rightarrow 4 \xrightarrow[3]{\textcircled{6}} 10 \xrightarrow[1]{\textcircled{4}} 14 \xrightarrow[6]{\textcircled{6}} 20 \xrightarrow[2]{\textcircled{2}} 26$$

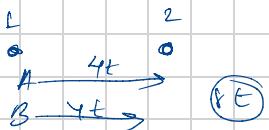
$$1 \ 3 \ 5 \ 7 \ 9 \rightarrow 25 \xrightarrow[5]{\textcircled{5}} 30 \xrightarrow[1]{\textcircled{1}} 28$$

$$\textcircled{1} \quad 1 \ 3 \ 5 \rightarrow 9 \xrightarrow[5]{\textcircled{5}} 14 \xrightarrow[2]{\textcircled{2}} 0$$

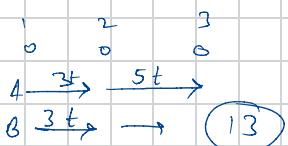
$$\frac{n}{2} [2 \times 1 + (n-1)2] = n[1+2n-2] = n(2n-1) = 2n^2 - n$$

$$S = \frac{n}{2} [2a + (n-1)d] = \frac{5}{2} [2 \times 1 + 4 \times 2] = \frac{5}{2} [2 + 8] = \frac{5}{2} \times 10 = 25$$

$$\textcircled{1} \quad N \rightarrow 2 \\ P \rightarrow 4$$

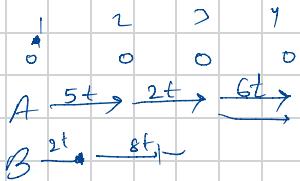


$$\textcircled{2} \quad N \rightarrow 3 \\ P \rightarrow 3 \ 5$$



$$\textcircled{3} \quad N \rightarrow 4 \\ P = 5, 2, 6$$

$\textcircled{3} + ?$



$$5 + 2 + 6$$

abc

a b c d

$$\begin{array}{r} b \geq a \\ a \geq b \end{array}$$

a

se

a b c ~~d e f~~

a b c ~~d e f~~

a b c ~~e f d~~

a b c ~~c f d~~ p

a b d c

a b d c p

a c b ~~c f d~~

a c ~~m~~ ~~f d~~

R G B

3 3 3 $k=2 \rightarrow 4$

3 2 4 $\begin{array}{l} 1 \rightarrow 1 \\ 3 \rightarrow 5 \end{array}$

1

$k=2 \rightarrow 4$

$k=2 \rightarrow$

5 2 4 $k=3 \rightarrow 5$

1 1 1 $k=1 \rightarrow 1$

1 2 1 $k=2 \rightarrow 3+1$

$\begin{array}{c} 2 \\ 1 \\ 1 \end{array}$

$k=4 \rightarrow 3+4=7$

$k=3$

\rightarrow

R

$2 \rightarrow 3+1 \rightarrow 4$

$4 \rightarrow 3+2 \rightarrow 5$

$6 \rightarrow 3+3 \rightarrow 6$

R

$3 \rightarrow 3+1$

$5 \rightarrow 3+2$

$7 \rightarrow 3+3$

$9 \rightarrow 3+4$

3	5	10	42		3	2	3		N	K	X			
6	4				1	2	3							
7	4				2	3	4..	✓	(3)	3	2	3		
8	4													
9	✓				1	2	3	4	(4)	3	3	3		
		X	YK											
					1	3	6	11	40	✓	(5)	5	3	6
					1	—	—	—	—					
					—	—	—	—	—	4	0	6	2	

$$\begin{array}{r}
 & 6 \\
 & 5 \quad 4 \quad 5 \\
 \underline{\times} & 2 \quad 3 \quad 5 \\
 \hline
 & (K>X) \quad (5>4) \\
 & 88 \\
 & (K>N) \quad 5>5 \quad Y
 \end{array}$$

$$\begin{array}{ccccccc}
 N & K & X \\
 7 & 5 & 4 & \rightarrow & X \geq k \textcircled{1} & / & K \leq n \textcircled{2} \\
 7 & 4 & 10 & \textcircled{3} & & & \\
 \hline
 1 & 2 & 4 & 8 & 16 & - & - \\
 1 & 2 & 3 & 4 & 5 & 6 & 7 \\
 2^0 & 2^1 & 2^2 & 2^3 & 2^4 & 2^5 & 2^6
 \end{array}
 \quad X \geq 2^{k-1} \quad K=3$$

$$\begin{array}{ccccccc}
 & 1 & 3 & 10 & & & \\
 \\[10pt]
 3 > K & x & & & & & \\
 3 > 21 & x & & & & & \\
 \\[10pt]
 x > K & & & & & & \\
 \\[10pt]
 & N & R & + & & & \\
 & 6 & 2 & 1 & & & \\
 & - & - & - & & & \\
 & 3 & - & - & & & \\
 & & & & & & \\
 & & & & 172 & & 4 \\
 & & & & 2 & \leq & 16 \\
 & & & & & & \checkmark \\
 & & & & & & \\
 & & & & & & \checkmark
 \end{array}$$

$$\begin{array}{r}
 673 \\
 \times 3 \\
 \hline
 6 \\
 3 \\
 \hline
 5 \\
 3 \\
 \hline
 672^2
 \end{array}
 \quad
 \begin{array}{r}
 5 \\
 3 \\
 \hline
 6 \\
 672^2
 \end{array}
 \quad
 \checkmark$$

$$C \ D \ L$$

$$\begin{array}{r} 1 \ 1 \ 4 \\ 1 \ 1 \ 2 \end{array}$$

$$\begin{array}{r} 1 \ 1 \ 8 \\ 4 \end{array}$$



$$75$$

$$\begin{array}{r} 48 \\ 20 \end{array}$$

$$\begin{array}{r} 11 \\ 11 \\ 11 \end{array}$$

$$\begin{array}{r} 44 \\ 33 \end{array}$$

$$\begin{array}{r} 16 \\ 24 \end{array}$$

$$\begin{array}{r} 11 \\ 11 \\ 11 \end{array}$$

$$\begin{array}{r} 2 \ 1 \\ 8 \end{array}$$

$$[4, 8]$$

$$4$$

$$\begin{array}{r} 3 \ 1 \\ 4 \end{array}$$

$$\begin{array}{r} 16 \ 4 \times 5 \\ 16 \ 4 \times 4 \\ 12 \ 4 \times 3 \\ 8 \ 4 \times 2 \end{array}$$

$$[4, 12]$$

$$[12]$$

$$15$$

$$\begin{array}{r} 80 \\ 24 \end{array}$$

$$5$$

$$[8, 16]$$

$$16$$

$$5$$

$$6$$

$$4$$

$$5$$

$$24$$

$$2$$

$$1$$

$$1$$

$$1$$

$$1$$

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$$7 \begin{smallmatrix} 2 \\ 2 \\ 1 \end{smallmatrix} 5 \rightarrow 48$$

$\hookleftarrow 20$

$\begin{smallmatrix} 2 \\ 2 \\ 2 \end{smallmatrix}$

$$6 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 9 \rightarrow 40$$

$\hookleftarrow 16$

$$15 \begin{smallmatrix} 2 \\ 2 \\ 1 \end{smallmatrix} 5 \rightarrow 80$$

\downarrow

$$5 \begin{smallmatrix} 2 \\ 2 \\ 1 \end{smallmatrix} \hookleftarrow 40$$

$$9 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 4 \rightarrow 13 \times 4$$

$$14 \hookleftarrow 20$$

$\begin{smallmatrix} 2 \\ 2 \\ 2 \\ 2 \end{smallmatrix}$

$\begin{smallmatrix} 2 \\ 2 \\ 1 \end{smallmatrix}$

$$6 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 5 \rightarrow 44$$

$\hookleftarrow 20$

$$10 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 5 \rightarrow 60$$

$$0 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} \hookleftarrow 20$$

$$11 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 5 \rightarrow 64$$

$\hookleftarrow 64$

$$15 \hookleftarrow$$

$$0 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 5 \rightarrow 20$$

$\hookleftarrow 20$

$\begin{smallmatrix} 2 \\ 2 \\ 2 \\ 2 \\ 2 \end{smallmatrix}$

$$7 \begin{smallmatrix} 2 \\ 2 \\ 2 \end{smallmatrix} 8 \rightarrow 60$$

$\hookleftarrow 32$

$$0 \begin{smallmatrix} 2 \\ 2 \\ 2 \end{smallmatrix} 8 \rightarrow (6+8) \times 4$$

$$16 \begin{smallmatrix} 2 \\ 2 \\ 1 \end{smallmatrix} \hookleftarrow (6+8) \times 4$$

$\hookleftarrow 32$

$$0 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} \hookleftarrow 8 \times 4$$

$$16 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} \hookleftarrow (7+8) \times 4$$

$\hookleftarrow 32$

$$7 \begin{smallmatrix} 2 \\ 2 \end{smallmatrix} 8 \rightarrow 9 \times 4$$

$$15 \hookleftarrow 9 \times 4$$

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1 1 2 2

① 1 2 3 4 5 | 1 2 3 5 6

5 2 3 4 5 5

2 3 4 5 5

3 4 5 5

4 5 5

1 1 2 3 5 6
1 2 2 3 5 6
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①

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1 2 3 4 5 6 6
③

1 2 3 4 5 → ③
6 → ④

2 3 4 5 5

3 4 4 5 5 5

4 4 4 5 5 5 5

③

1 1 2 2 3 3 4 4 5 5 6 6
①

1 2 3 4 5 6 7 8 9 ⑤

112
113 4 5 5 9 13

$$100 \times 100 = 10000$$
$$100 - \frac{5+1}{9} = 100 - \frac{6}{9} = 100 - \frac{2}{3} = 100 - 0.666\ldots = 99.333\ldots$$