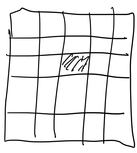
R642

Tuesday, 10 November 2020 08:09



$n = 5$

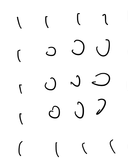
$$\sum_{i=1..\lfloor n/2 \rfloor} 2(2i+1)i + 4\sum_{j=1..i} j + 2i(2i-1)$$

$$= \sum_{i=1..\lfloor n/2 \rfloor} 2i(2i+1) + 2i(i+1) + i(2i-1)$$

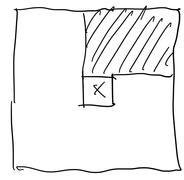
$$= \sum_{i=1..\lfloor n/2 \rfloor} 2i\left(2i+1+i+1+2i-1\right) =$$

$$= \sum 2i(5i+1)$$

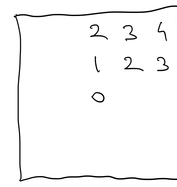
$i=1$ $\quad 6+4+2$ (12)



$i=2$ $\quad 20+12+2=34$



$p=2$



$$4\sum_{x=0..p}\sum_{y=1..p} x+y =$$

$$4\sum_{x=0..p} x\cdot p + p\cdot\frac{(p+1)}{2} =$$

$$4\cdot p\,\frac{(p+1)^2}{2} + 4p\cdot\sum_{x=0..p} x =$$

$$2\cdot p(p+1)^2 + 4\cdot p\cdot(p+1)\cdot p/2 =$$

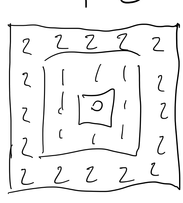
$$2\cdot p(p+1)^2 + 2p^2(p+1)$$

$p=1$ $\quad 8+4=12$

Arghh.... diagonal moves!!!

$$4\cdot\sum_{x=0..p}\sum_{y=1..p} \max(x,y) =$$

$=$



$$\sum_{i=1..p} i\cdot 4\cdot 2i$$

$$= 8\sum_{i=1..p} i^2$$

$$= \frac{4}{3}\cdot p(p+1)(2p+1)$$

$i=1$ $\quad \Rightarrow \frac{4}{3}\cdot 6 = 8$

$i=2$ $\quad \Rightarrow \frac{4}{3}\cdot 2\cdot 3\cdot 5 =$

$= 40$