```
algoritmo(n)
    i = 1
    s = 3
    while(i<=n)
        j = 0
        p = 4
        while(j <= i)
            p += 2
            j+=1
        end
        s+=2p
        i+=2
    end
end
```

1

1, 3, 5, 7, ... n $\lceil \frac{n}{2} \rceil + 1$

$\lceil \frac{n}{2} \rceil$

$\lceil \frac{n}{2} \rceil$

t_i

$t_i - 1$

$t_i - 1$

$\lceil \frac{n}{2} \rceil$

$\lceil \frac{n}{2} \rceil$

```
j=0
while(j <= i)
    p += 2
    j+=1
end
```

contador iteraciones

i	k	j	
1	1	0 1 2	3
3	2	0 1 2 3 4	5
5	3	0 1 2 3 4 5 6	7
7	4	0 1 2 3 4 5 6 7 8	9

$2k+1$

$k = \frac{i+1}{2}$

$k = \frac{n+1}{2}$

$t_i = \sum_{k=1}^{\frac{n+1}{2}} (2k+1)$

$\left(\frac{n+1}{2}\right) \cdot \left(\frac{n+1}{2} + 1\right) + \frac{n+1}{2}$

$t_i = \sum_{k=1}^{\frac{n+1}{2}} 2k$

$\Theta(n^2)$

$\sum_{i=1}^{p} i = \frac{p(p+1)}{2}$

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```

(j, p)

$(0, 4)$

$(j, p) \to (j+1, p+2)$

$(i+1, 4+2(i+1))$

$(0, 4) \to (1, 4+2) \to (2, 4+2+2) \to (3, 4+2+2+2)$

$(x, 4 + \sum_{w=1}^{x} 2) \to (x, 4+2x)$

$(0, 4)$ $(0, 4)$

$(i+1, 4+2(i+1)) \to (i+1, 4+2(i+1))$

$(j, p) \to (j+1, p+2)$

$(j, 2j) \to (j+1, 2(j+1))$

$(j+1, 2j+2)$

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```

$s += 2(4 + 2(i+1))$

(i, s) $(1, 3)$

$(n+1, ?)$

k=1   k=2   k=3

$(1, 3) \to (3, 3+2(4+2(2))) \to (5, x+2(4+2(4)))$

$k = \frac{i+1}{2}$

$(i, s) \to (i+2, s+2(4+2(i+1)))$

$(k, s) \to (k+1, s+2(4+2(2(k-1))))$

$(k, s) \to (k+1, s+8k)$

k=4

$(7, y+2(4+2(6)))$ $2(k-1)$

$k = \frac{n+1+2}{2}$

$k = \frac{n+2}{2}$

$\left(x, 3 + \sum_{k=2}^{x} 2(4+2(k-1))\right)$

$3 + \sum_{k=2}^{x} (8 + 4k - 4) =$

$\sum_{k=1}^{x} 8 - 8 + \sum_{k=1}^{x} 4k - 4(1) - \sum_{k=1}^{x} 4 + 4$

$8x - 8 + \frac{4x(x+1)}{2} - 4x + 4 - 4$

$8x - 8 + 2x^2 + 2x - 4x + 4 - 4$

$2x^2 + 6x - 8$

$\boxed{(x, 3 + 2x^2 + 6x - 8)}$

$(1, 3)$ ✓

$\left(\frac{n+2}{2}, 3 + 2\left(\frac{n+2}{2}\right)^2 + 6\left(\frac{n+2}{2}\right) - 8\right)$

$(k, s) \to (k+1, s+2(4+2(2k-1))) \to 2(4+4k-4)$

$(x, 2x^2+6x-5) \to (x+1, 2(x+1)^2 + 6(x+1) - 5)$

s

$(x+1, 2x^2 + 4x + 2 + 6x + 6 - 5)$

$(x+1, s + 4x + 8)$