$$(t-285) + \frac{t(t+1)}{2} - \frac{285(285-1)}{2} = (p-165) + 3\left(\frac{p(p+1)}{2} - \frac{165(165-1)}{2}\right) = (h-143) + 4\left(\frac{h(h+1)}{2} - \frac{143(143-1)}{2}\right)$$

$$(t-285) + \frac{t(t+1)}{2} - 40470 = (p-165) + 3\left(\frac{p(p+1)}{2}\right) - 40590 = (h-143) + 4\left(\frac{h(h+1)}{2}\right) - 40612$$

$$t + \frac{t(t+1)}{2} = 40755$$

$$= p + \frac{3\,p(p+1)}{2} - 40755 = h + \frac{2h(h+1)}{2} - 40755 \geq 0$$

$$\frac{t^2 + 2t + \#}{2} - 40755 = \frac{3p^2}{2}$$

Sums

$$\frac{t^2 + 3t}{2} - 40755 = $$

$$\frac{1}{2}t^2 + \frac{3}{2}t - 40755 = \emptyset$$

$$\frac{3}{2}p^2 + \frac{9}{2}p - 40755 = \emptyset$$

$$2h^2 + 3h - 40755 = \emptyset$$

$$\frac{3p^2 + 5p}{2} - 40755 = 2h^2 + 3h - 40755$$

$$\frac{1}{2}t^2 + \frac{3}{2}t = 46755$$

sum exterior

attach notifiers
to jobs

- threshold
- support more
  tmax

pre-compute:
max found:
3 is larget of 3
greatest
A B

$$\frac{n(n+1)}{2} = \frac{n'(3n'-1)}{2} = n''(2n''-1)$$

```
-2- 3- 4- 5-        +1
 1  3  6  10  15
-4- 5  7 - 12 - 22 - 13 - 35   +3
 1
-5- 9 - 13 - 15              +4
 1  6 - 15 - 28
```

start @ H_{144}
1st if Pentagonal
1st if T

(Prob 4/5)

$$T(285) = P(165) = 40755 = H(143)$$

40755

$T_{284} = 40470 \to \quad 285 \quad +286 \quad +287... \quad T_d =$
$\phantom{T_{284}} \quad \quad \quad +1$
$P_{164} = 46262 : \quad 493 \quad +497 \quad +560 \quad +563...$
$H_{142} = 40186 : \quad 569 \quad +573 \quad +577 \quad +581...$

$T_0 = P_0 = H_0 > \phi$

$T' =$
$P' = 4 + 3(n-1) = 1 + 3n$
$H' = 1 + 4n$

Next int = n+1

Maybe:
calc T until >
next P, calc
next P, repeat
if ==
calc next H
etc...

$P = n'(3n'-1)/2 = T$

$\dfrac{2T}{3n'-1} = n' \Rightarrow 3n'-1$

$\dfrac{2T}{n'} + 1 = 3n'$

$2T + n' = 3n'^2$

$\sqrt{}\quad \dfrac{3n'^2 - n'}{2}$

$2T = 3n'^2 - n'$
$2T = n'(3n'-1)$

$\sum_{285} 1+i = \sum_{165} 1+3i = \sum_{143} 1+4i$

$285 + \sum_{285} 1+i = 165 + \sum_{165} 1+3i = 143 + \sum_{143} 1+4i$

$\sum_{285} 285 + \sum_{285} i = 165 + \sum_{165} 1 + 3i = 143 + \sum_{143} 4i$

$\dfrac{t}{285} + \sum_{285} i = \dfrac{P}{165} + \sum_{165} i + 3i = \dfrac{h}{143} + \sum_{143} i + 4i$

$(t-285) + \sum_{285} i = (P-165) + 3i = (h-143) + 4i$