60% || 30%

= 90% − 18% = 72%

$mid = \frac{mx + mn}{2}$

≤ mid | > mid

1 2 | 3 | 4 5

1 2 3] 4 5

1 2] 3 6 | 9

1] 2

3 1 3 1 3

1 1 | 3 3 3

mid = 2

order does not matter!

---

start: k

goal: [l, r]

+ days

−x per day

+y he can do @ start of day

8 [1, 10] t=2 −6 +4

−6 = 2

−6 = 2 −6 +5 d=1

+5 −6 = 1 ✓

---

9 [1, 10] t=9 −2 +9

7

5

3

1

8

6

4

2

0 :(

---

20 [15, 25] t=3 −5 +7

x y

15

17

19

if we are same level again
it's a win (we can cycle)

what's the range we need to cover?

$l \le r$

$k + y \ge r \quad d = r - k$

$k - px + y \le r$

$y > d \quad y - px \le d$

$y - d \ge 0$

min p? x = 3

$px \ge y - d$

$p = \lceil \frac{y-d}{x} \rceil$

next Level = $k - \lceil \frac{y-d}{x} \rceil \cdot x + y$