

Day 6

06/12/23

07:50

d: distance exers

t: time available

h: hold time

g: goal distance

$$d = (t-h)h - g$$

$$= th - h^2 - g$$

$$-t \pm \sqrt{t^2 - 4g}$$

Negative quadratic in h

$$= -h^2 + th - g$$

value will be positive

$$= \frac{-t \pm \sqrt{t^2 - 4g}}{-2}$$

$$\frac{1}{2}(t \pm \sqrt{t^2 - 4g})$$

between the roots.

$$= -t \pm \frac{1}{2}\sqrt{4(1-g)}$$

Therefore, find roots and

count integers between

$$= t \pm \sqrt{1-g}$$

t	g	$t^2 - 4g$	$\sqrt{t^2 - 4g}$	L	U
57	291	2085	45.6618	51.6691	51.3309
72	1172	496	22.2711	24.8691	47.14

64 1176 [This is where I remembered 30.73 38.27

92 2026 I had a scientific calculator and didn't need my phone] 36.51 55.49

$$1. 51 - 6 + 1 = 46$$

$$2. 47 - 25 + 1 = 23$$

$$3. 38 - 31 + 1 = 8$$

$$4. 37 - 55 - 37 + 1 = 19$$

t	g
71536	940200
57726492	2911172 1176 2026
L	U
5,582,942.1	52,144,049.9

$$-120612$$

$$p1 \quad 160816$$

$$52144049 - 5,582,943 + 1$$

$$p2 = 4,65 \quad 46 \quad 561 \quad 107$$