



$$\begin{aligned} \text{adjacent} &= \text{cells_per_generation}/2 \\ \text{opposite} &= \tan(\theta) * \text{adjacent} \\ \text{deque_len} &= \tan(\theta) * \text{cells_per_generation}/2 + \text{cells_per_generation}/\sqrt{2} \end{aligned}$$

simplify and ensure deque_len is an int

$$\text{deque_len} = \text{floor}(\text{cells_per_generation} * (1/2 * \tan(\theta) + 1/\sqrt{2}))$$