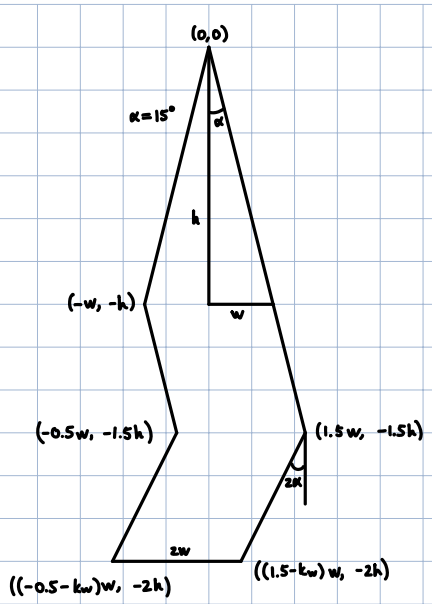
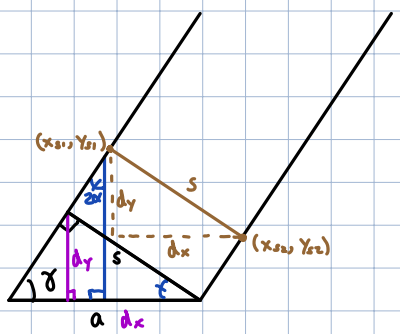


$h = \frac{1}{2} \cdot \text{tile\_height}$

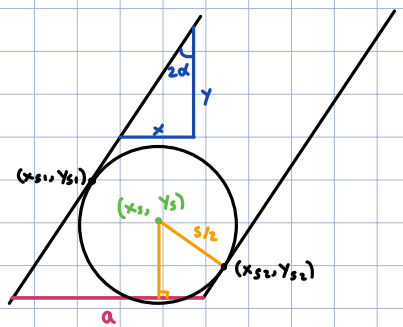
$w = h \tan\alpha$

$$W_2 = \frac{h}{2}\tan(2\alpha) = \frac{1}{2}\frac{2h\tan\alpha}{1-\tan^2\alpha} = \underbrace{\frac{1}{1-\tan^2\alpha}}_{k_w}\ \underbrace{h\tan\alpha}_{w}$$



$$\begin{cases} d_y = S\cdot\sin(2\alpha) \\ d_x = S\cos(2\alpha) \end{cases}$$

$$\begin{cases} y_{s2} = y_{s1} - d_y \\ x_{s2} = x_{s1} + d_x \end{cases} \quad (1)$$



$$y = \underbrace{\frac{1}{\tan(2\alpha)}}_{k} x = kx \quad (2)$$

$$\begin{cases} x_s = \frac{x_{s1}+x_{s2}}{2} \\ y_s = \frac{y_{s1}-y_{s2}}{2} \end{cases}$$

$$\frac{y_{s1}+y_{s2}}{2} = \frac{S}{2}$$

$$\Rightarrow$$

$$y_{s2} = S - y_{s1} \quad (3)$$

(1) + (3): $S - y_{s1} = y_{s1} - d_y$

$$2y_{s1} = S + d_y$$

$$\left.\begin{aligned} y_{s1} &= \frac{S+d_y}{2} \\ y_{s2} &= \frac{S-d_y}{2} \end{aligned}\right\} \overset{(2)}{\Rightarrow} \quad x_{s1} = \frac{S+d_y}{2k}$$

$$x_{s2} = \frac{S+d_y}{2k} + d_x$$