



$$V_{A/B} = \sqrt{\underbrace{(V_A \cos 45^\circ - (-V_B \cos 30^\circ))^2}_{\text{hor}} + \underbrace{(V_A \sin 45^\circ - V_B \sin 30^\circ)^2}_{\text{vert}}}$$

$$t = \frac{d_0}{V_{A/B}}$$