

Rumus V2.

* Delta position.

$$dx = X_t - X$$

$$\text{Dimana: } dx = \text{delta } x$$

$$Y_t = \text{Target } Y$$

$$dy = Y_t - Y$$

$$dy = \text{delta } y$$

$$\theta_t = \text{target sudut (radians)}$$

$$d\omega = \theta_t - \theta$$

$$X_t = \text{Target } x$$

$$\theta_t = \text{sudut sekarang (radians)}$$

* Rerhitungan jarak tempuh tercepat.

$$s = \int dx^2 + dy^2$$

* Hitung kecepatan arah sumbu x dan y (vektor global).

$$V_x = V \times dx/s$$

$$\text{Dimana } V = \text{Speed/kecepatan.}$$

$$V_y = V \times dy/s$$

* Transformasi Global ke local.

$$\text{* ~~VT = (cos(\theta) \times Vx) + (sin(\theta) \times Vy)~~}$$

$$V_{x_local} = (\cos(\theta) \times V_x) + (\sin(\theta) \times V_y)$$

$$V_{y_local} = (-\sin(\theta) \times V_x) + (\cos(\theta) \times V_y)$$

* Kecepatan sudut motor.

$$\omega_1 = \left(\frac{2}{3} \times V_{x_local} \right) + \left(\frac{1}{3} \times \omega \right)$$

$$\omega_2 = \left(-\frac{1}{3} \times V_{x_local} \right) + \left(\frac{1}{\sqrt{3}} \times V_{y_local} \right) + \left(\frac{1}{3} \times \omega \right)$$

$$\omega_3 = \left(-\frac{1}{3} \times V_{x_local} \right) + \left(-\frac{1}{\sqrt{3}} \times V_{y_local} \right) + \left(\frac{1}{3} \times \omega \right)$$