S#2 :: Go to Goal

e = error d = desired
g = goal C = current
                     t = turn

Trigonometry Class

$$x_e = x_d - x_c$$
$$y_e = y_d - y_c$$
$$d = \sqrt{x_e^2 + y_e^2}$$

$$\theta_g = \tan^{-1}\left(\frac{y_e}{x_e}\right)$$
$$\theta_t = \theta_g - \theta_c$$

① Distance
② Orientation
③ Error   (Sol)

$x_e = 6 \quad y_e = 5$
$d = \sqrt{36 + 25} = 7.1$

$\theta_g = 30°$ $\theta_c = 20$

$$x = d \quad \xi \quad z = \theta_t$$