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← direction of motion

$$m = \frac{-x - y}{\omega - x} = -x$$

← direction of motion

$$y - x = -x(x - y) \rightarrow y - x = -x^2 + xy \rightarrow$$

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$$y = -x^2 + x + 1$$

$$xy + 4x + 1 = 0 \rightarrow m = -x$$

← direction of motion

$$x/y \rightarrow m = m' \rightarrow y - x = -x^2(x - y) \rightarrow$$

$$y - x = -x^3 + x^2 \rightarrow y = -x^3 + x^2 + 1$$

$$x + y = 1 \rightarrow m' = -\frac{1}{m} \rightarrow m' = x \leftarrow direction of motion$$

$$y - x = x^2(x - y) \rightarrow y - x = x^3 - x^2 \rightarrow y = x^3 - x^2 + 1$$

$$\tan \alpha \rightarrow \tan \alpha = \sqrt{x} \rightarrow$$

← direction of motion

$$y - x = \sqrt{w}(x - k) \rightarrow y = x\sqrt{w} + (-k\sqrt{w} + y)$$

$$AB = \sqrt{\underbrace{(y+1)^2}_a + \underbrace{(w-y)^2}_b}$$

$$= \omega$$

$$\leftarrow \omega \leftarrow y$$

$$wx + ky - w = 0 \quad \frac{x = y}{y = w} \rightarrow \frac{|y + 1 - w|}{\sqrt{1 + w}}$$

$$y = w$$

$$= \frac{1\omega}{\omega}$$

$$= w$$

$$xm + y = y, \quad kx + y = w \rightarrow xm + y = k$$

$$\leftarrow \omega \leftarrow y$$

$$\frac{c + c'}{y} \Rightarrow xm + y = \frac{y + k}{y} = \omega \rightarrow xm + y = \omega$$

$$y$$

$$kx + y - w = 0, \quad xm + y - y = 0$$

$$x(xm + y - k) = 0$$

$$\leftarrow \omega \leftarrow w$$

$$\frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{y}{\sqrt{k + a}}$$

$$= \frac{y\sqrt{w}}{1w}$$

$$v_n - vy = 1 \rightarrow v_n - vy - 1 = 0$$

↖

$$v_n + vy = v \rightarrow v_n + vy - v = 0$$

$$\frac{|v_n - vy - 1|}{\sqrt{1 + v^2}} = \frac{|v_n + vy - v|}{\sqrt{1 + v^2}} \rightarrow$$

↗

$$|v_n - vy - 1| = |v_n + vy - v| \rightarrow v_n - vy - 1 = v_n + vy - v$$

$$n + v = \omega y \rightarrow y = \frac{1}{\omega} n + \frac{v}{\omega} \rightarrow -n + \omega y - v = 0$$

$$v_n - vy - 1 = -v_n - vy + v$$

$$\rightarrow y - v = -\omega n \rightarrow y + \omega n - v = 0$$

$$\tan \alpha = \frac{|\vec{m} - \vec{m}'|}{|1 + mm'|} = \frac{v + v'}{1 - vv'} = \frac{\omega}{\omega'} = 1$$

↖

$$\rightarrow \alpha = \frac{v}{\omega} \frac{1}{1 - vv'} = \frac{v}{\omega} \rightarrow \alpha = \frac{v}{\omega}$$

↗

$$B \begin{vmatrix} -\omega \\ \kappa \end{vmatrix}$$

$$A \begin{vmatrix} \kappa \\ -\nu \end{vmatrix}$$

201 ← 4

$$\sqrt{\underbrace{(\kappa + \omega)^2}_{4\kappa} + \underbrace{(-\nu - \kappa)^2}_{\kappa^2}} = \sqrt{100} = 10$$

$$= \sqrt{100} = 10$$

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$$M\left(\frac{\kappa_1 + \kappa_2}{\nu}, \frac{y_1 + y_2}{\nu}\right)$$

← 20 ← 4

$$\rightarrow \kappa_m = \frac{\kappa - \omega}{\nu} = -1$$

$$y_m = \frac{\kappa - \nu}{\nu} = 1$$

$$\left. \begin{matrix} \kappa_m = -1 \\ y_m = 1 \end{matrix} \right\} M(-1, 1)$$

$$\frac{-10 + \kappa - \nu}{\kappa} = \kappa = -\kappa$$

$$\frac{-1\nu + \kappa + 1}{\kappa} = y = -\kappa$$

$$\left. \begin{matrix} \kappa = -\kappa \\ y = -\kappa \end{matrix} \right\} \rightarrow (-\kappa, -\kappa)$$

← 201 ← 4

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$$\begin{Bmatrix} 10 & 1 & 1 \\ -1 & 10 & 1 \\ -10 & -1 & 1 \end{Bmatrix} \rightarrow \frac{1}{1} (10 + 10 + 10 + 1 + 10) = 19 + 1 + 10 + 10 = 40$$

← 20 ← 1

10 + 1 + 10 + 10

$$y = -\left(\frac{10n+1}{10n-1}\right) \rightarrow y = \frac{-10n-1}{10n-1}$$

← 20 ← 1

نترشی ی

$$y = \frac{-10n+1}{-10n-1}$$

← 20 ← 1

نترشی ی

$$n = \frac{10y+1}{10y-1} \rightarrow y = -\left(\frac{-10n-1}{10n-1}\right) \Rightarrow$$

← 20 ← 1

$$y = \frac{10n+1}{10n-1}$$

$$\frac{v}{n' + v} \rightarrow y' + v = \frac{v(n' + v) + 1}{(n' + v) - v} = \frac{vn' + v}{n'}$$

$$y' = \frac{vn' + v - vn'}{n'} \Rightarrow y' = \frac{v}{n'}$$

$$vn + ky = v$$

← 0 ≤ v ≤ 10

$$n - \omega y = 1 \rightarrow n = \omega y + 1$$

$$vn + ky = v \rightarrow 1\omega y + v + ky = v \rightarrow 1\omega y = -1 \rightarrow y = -\frac{1}{\omega}$$

$$n = \omega y + 1 = 1 - \frac{1}{\omega}$$

$$\rightarrow n = 1 - \frac{1}{\omega}, y = -\frac{1}{\omega}$$

(y)

$$n = \frac{\begin{vmatrix} b' & c' \\ a' & b' \end{vmatrix}}{\begin{vmatrix} a & b \\ a' & b' \end{vmatrix}} = -\frac{v+10}{-10+v} = \frac{v}{10}$$

← 0 ≤ v ≤ 10

$$y = \frac{\begin{vmatrix} a & c \\ a' & c' \end{vmatrix}}{\begin{vmatrix} a & b \\ a' & b' \end{vmatrix}} = \frac{v-v}{-10} = -\frac{1}{10}$$

$$n = \frac{v}{10}, y = -\frac{1}{10}$$

