

الف)  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 1}{3 - 1} = \frac{1}{2} \Rightarrow \frac{1}{2}(x - 1) = y - 1$

$2x - 2 = y - 1 \Rightarrow y = 2x - 1$

ب)  $-\frac{x}{y} = -\frac{4}{2} = -2 \Rightarrow -2(x - 1) = y - 1$

$-2x + 2 = y - 1 \Rightarrow y = -2x + 3$

ج)  $-\frac{x}{y} = -\frac{1}{3} \xrightarrow{\text{عکس وارده}} 3 \Rightarrow 3(x - 1) = y - 1$

$3x - 3 = y - 1 \Rightarrow y = 3x - 2$

د)  $\frac{\pi}{3} = 60^\circ \xrightarrow{\text{نسبت}} \tan 60^\circ = \sqrt{3} \Rightarrow \sqrt{3}(x - 1) = y - 1$

$y = \sqrt{3}x - \sqrt{3} + 1 \leftarrow y - 1 = \sqrt{3}x - \sqrt{3}$

الف)  $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{3^2 + 2^2} = \sqrt{9 + 4} = \sqrt{13} = \sqrt{13}$

ب)  $\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} = \frac{|4x + 12y - 3|}{\sqrt{4^2 + 12^2}} = \frac{13}{13} = 1$

$4x + 12y - 3 = 0 \quad 4x + 12y - 13 = 0 \rightarrow \text{موازی}$

الف)  $\frac{c + c'}{2} = \frac{-3 - 13}{2} = -8 \Rightarrow 4x + 12y - 8 = 0$

ب)  $\frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{|-3 - 13|}{\sqrt{4^2 + 12^2}} = \frac{16}{13} = \frac{16\sqrt{13}}{13}$



تاریخ: / /

موضوع: بررسی خطایابی از هم بردار ۱۵



$$\frac{|x_n - y - 1|}{\sqrt{13}} = \frac{|x_n + y - 3|}{\sqrt{13}} \rightarrow x_n - y - 1 = x_n + y - 3 \quad -۴$$

$$x - y + 2 \Rightarrow -x + y = +2$$

$$x_n - y - 1 = -x_n - y + 3$$

$$2x_n + y = 4$$

است

فاصله هر نقطه روی منیستاز از دو خط به یک اندازه

$$\tan \left| \frac{m - m'}{1 + mm'} \right| \rightarrow \left| \frac{a}{1 - y} \right| = 1 \quad y + x_n = 3 \rightarrow a = -3 \quad (Ea + a)$$

$$y - x_n = a \rightarrow a = 2$$

$$\tan 45$$

$$\text{الف) } \sqrt{(1)^2 + (4)^2} = \sqrt{17} = 1.0 \quad \text{ب) } \frac{-a \pm (x+3)}{2} = \frac{-1 \pm 3}{2} = -1, -6$$

$$\frac{4 - (1+2)}{2} = 1.5 \quad (-1, 1)$$

$$\text{الف) } \frac{-1.0 - 2 + 3}{2} = -3, \quad \frac{-1.0 + 3 + 1}{2} = -3 \rightarrow (-3, -3) \quad -۷$$

$$\text{ب) } \begin{matrix} -1.0, -2 \\ -1.3, 3 \\ 3, 1 \\ -1.0, 2 \end{matrix} \Rightarrow \frac{-3.0 - 1.3 + 6 - 2.4 - 9 + 1.0}{2} = \frac{-10.7}{2} = -5.35$$

$$\text{الف) } -y = \frac{x_n + 1}{x_n - 3} \Rightarrow y = \frac{-x_n - 1}{x_n - 3} \quad -۸$$

$$\text{ب) } y = \frac{-x_n + 1}{-x_n - 3} \quad \text{ج) } x = \frac{y + 1}{y - 3} \Rightarrow x_n y - x_n = y + 1$$

$$x_n y - y = x_n + 1$$

$$x_n (y - 1) = x_n + 1$$

$$y = \frac{x_n + 1}{x_n - 1}$$

$$\text{د) } -x = \frac{-y + 1}{-y - 3} \Rightarrow y = -\frac{x - 1}{x + 3}$$

۹-  $x' = x - 2$  الف،  $x' = x - 2 \rightarrow x = x' + 2$

$y' = y - 3$   $y' = y + 3 \rightarrow y = y' - 3$

$y' - 3 = \frac{2(x' + 2) + 1}{(x' + 2) - 3} = y' = \frac{2x' + 5}{x' - 1} + 3 \Rightarrow \frac{5x' + 2}{x' - 1} = y'$

$x' = x - 3, y' = y - 2 \rightarrow y' + 2 = \frac{2(x' + 3) + 1}{x' + 3 - 3} = y' = \frac{2x' + 7}{x'} + 2$   
 $x = x' + 3, y = y' + 2$

الف)  $\begin{cases} 3x + 5y = 2 \\ -3x + 15y = -3 \end{cases} \rightarrow 19y = -1$   
 $y = -\frac{1}{19}$

$y' = \frac{V}{x'}$

$x - 2y = 1 \rightarrow x = \frac{-5}{19} + \frac{19}{19}$   
 $x = \frac{14}{19}$   
 $y = -\frac{1}{19}$

ب)  $x = -\frac{1}{19}$   $y = \frac{15}{19} = \frac{15}{19}$

$\begin{cases} 3x + 5y = 2 \\ x - 2y = 1 \end{cases}$