

17

۲۵
افزون!

سپهر علی

نسبت: $\frac{m-k}{x-c-r} = -\frac{1}{2} \Rightarrow m-k = -3$

$S_{AB} = (x-c-r)^2 + (m-k)^2 = 3^2 + 9 = 18$ ✓

(۲)

A (-1, 4)

B (3, 1)

C (x, y)

D (-1, x, y, 3)

AB, B-A = (3-c-1), 1-4 = (2, -3)

BC = (x-3, y-1) $\Rightarrow (2, -3) \cdot (x-3, y-1) = 0$

$2(x-3) - 3(y-1) = 0$

A + C = B + D $\Rightarrow (-1, 4) + (x, y) = (3, 1) + (-1, x, y, 3)$

$\Rightarrow x-1 = 3-x \Rightarrow 2x=4 \Rightarrow x=2$ $y=-1$

$\Rightarrow |AB| = \sqrt{2^2 + 3^2} = \sqrt{13}$ ✓ $\Rightarrow BC = C-B = (2-3, -1-1) = (-1, -2) \Rightarrow |BC| =$

$\frac{\sqrt{13}}{\sqrt{5}} = \frac{1}{2}$ ✓

جواب: $2(|AB| + |BC|) = 1 + 1 = 2$ ✓

$$\tan \theta' = \sqrt{r} \cdot m'$$

$$(m' = 1) y = rmx + r$$

$$m' = \sqrt{r} = \frac{-rm}{m^2 - 1} \Rightarrow$$

$$\sqrt{r}m^2 = \sqrt{r} = -rm$$

$$\sqrt{r}m^2 + rm - \sqrt{r} = 0$$

$$\text{Nilai} = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{r+1r}}{\sqrt{r}} = \left(\frac{r}{\sqrt{r}} \right) \checkmark$$

$$AH \perp BC$$

$$BC \Rightarrow m = \frac{11-r}{v-r} = r$$

$$y = rx + b$$

$$r = 4 + b$$

$$b = -r$$

$$y = rx - r$$

$$y - rx + r = 0 \quad (1)$$

$$\frac{|9 - r + r|}{\sqrt{1+r}} = \frac{1}{\sqrt{r}} = \frac{r \times r}{r^2} = \left(\frac{r}{\sqrt{r}} \right) \checkmark$$

$$A(1, 9)$$

$$AB: y = -rx + v \Rightarrow ry = -rx + 1r \quad (1)$$

$$AC: ry = rx + 1r$$

$$BC: ry = vx - 1r \quad (2)$$

$$B: (1) = (2) \Rightarrow -rx + 1r = vx - 1r$$

$$rv = 11r$$

$$r = v$$

$$y = -rx + v = 1$$

$$B(r, 1)$$

$$AC: ry = vx - 1r$$

$$\frac{|r - 9 - 1r|}{\sqrt{r^2 + r}} = \left(\frac{r}{\sqrt{r}} \right) \checkmark$$

$$\frac{x}{-\frac{r}{l}} = \frac{y}{-\frac{r}{l}} = 1 \Rightarrow \frac{y}{x} = -\frac{r}{x} - 1 \Rightarrow y = -rx - 4$$

$$\Rightarrow -10 - 4 = -14 = -r \Rightarrow r = 14$$

$$d = \frac{r}{\sqrt{1+r^2}} = \frac{14}{\sqrt{1+196}} = \frac{14}{\sqrt{197}}$$

$$y - rx = 1 \Rightarrow m = \frac{a}{r} = a$$

$$ay - rx = a - 1 \Rightarrow m' = \frac{1}{a} \Rightarrow a = \frac{1}{a} \Rightarrow a = \pm 1$$

$$a = 1 \Rightarrow \begin{cases} y - x = 1 \\ y - x = 0 \end{cases}$$

$$a = -1 \Rightarrow \begin{cases} y + x = 1 \\ y - x = -1 \end{cases} \Rightarrow \begin{cases} x - y + 1 = 0 \\ x - y = 0 \end{cases} \Rightarrow d = \frac{|1-0|}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$x^2 + \frac{1}{x^2} = 10 \Rightarrow x^2 + \frac{1}{x^2} = 10 \Rightarrow x^2 = 10 - \frac{1}{x^2} \Rightarrow$$

$$x^2 = 9 \Rightarrow x = \pm 3 \Rightarrow \frac{1}{x^2} = \frac{1}{9} \Rightarrow \frac{1}{x^2} = \frac{1}{9} \Rightarrow x = \pm 3$$

$$AB = \frac{|1-0-1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

$$t_{AC} = m_{BC} = \frac{1}{r}$$

$$t_{AC} = \frac{AB}{AC} = \frac{1}{r} \Rightarrow BC = \frac{9}{r} \Rightarrow \frac{1}{r} = \frac{1}{9} \times \frac{9}{r} \Rightarrow \frac{1}{r} = \frac{1}{9} \Rightarrow r = 9$$

$$(1, 10)$$

$$m = \frac{a-b}{\frac{1}{a} - \frac{1}{b}} = \sqrt{3} \Rightarrow a-b = \frac{\sqrt{3}}{6}$$

-9

(2)

$$|AB| = \sqrt{(a-b)^2 + (\frac{1}{a} - \frac{1}{b})^2} = \sqrt{\frac{3}{36} + \frac{1}{36}} = \sqrt{\frac{1}{9}} = \frac{1}{3}$$

$$\text{طول} = \sqrt{2} \times |AB| = \frac{\sqrt{2}}{3}$$

$$r = \sqrt{w^2 + \varepsilon^2} = d \Rightarrow w^2 + \varepsilon^2 = r^2 \Rightarrow$$

-10

(2)

$$m = \frac{-\varepsilon}{-r} = \frac{\varepsilon}{r} \Rightarrow m = \frac{-r}{\varepsilon} \Rightarrow y-r = -\frac{r}{\varepsilon} (x+r) \Rightarrow$$

$$y = \frac{-r}{\varepsilon} x - \frac{r}{\varepsilon} - \varepsilon = \frac{-r}{\varepsilon} x - \frac{r+d}{\varepsilon} \Rightarrow$$

$$\frac{-r}{\varepsilon} x - \frac{r+d}{\varepsilon} \Rightarrow y = \frac{\varepsilon}{r} x + b \Rightarrow \frac{|b|}{\sqrt{1+m^2}} = d \Rightarrow |b| = \frac{r+d}{\varepsilon}$$

$$\frac{|b|}{\frac{d}{r}} = d \Rightarrow |b| = \frac{rd}{r} \Rightarrow y = \frac{\varepsilon}{r} x + \frac{rd}{1} \Rightarrow \frac{rd}{1} = \frac{d}{r}$$

$$y = -\frac{r}{\varepsilon} - \frac{rd}{\varepsilon}$$

$$y = \frac{\varepsilon}{r} x + \frac{rd}{r} \Rightarrow 1 \times \left(\frac{\varepsilon}{r} x + \frac{rd}{r} \right) = -\frac{r}{\varepsilon} - \frac{rd}{\varepsilon} \Rightarrow x = -\sqrt{3}$$

$$y = \frac{\varepsilon}{r} (-\sqrt{3}) + \frac{rd}{r} = \frac{-\sqrt{3}}{3} = -1 \Rightarrow (-\sqrt{3}, -1) \Rightarrow -\sqrt{3} \times 1 = \sqrt{3}$$

dotnote