

Subject:

Year:

Month:

Day:

20/10/2019

14/10/2019

دینا سادات رفیعی

1 $A(-2, k)$ $B(2, m)$ $m_{AB} = \frac{\Delta y}{\Delta x} = \frac{m-k}{4} = -\frac{1}{4} \Rightarrow m-k = -1$ (1)

2 $\text{Distance } AB = \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{(4)^2 + (-1)^2} = \sqrt{17}$ (2)

3 $\text{Column } AB = (4, -1) \Rightarrow \sqrt{17}$

5 $A(-1, 2)$ $B(2, 1)$ $x_A + x_C = x_B + x_D$ (3)

6 $D(-1, 2)$ $C(2, 1)$ $-1 + x = -1 - 2 + 3 \Rightarrow x = 3 \Rightarrow x = 3$

7 $G(\frac{0}{2}, y+2)$ $G(\frac{2}{2}, y)$ $AB \perp BC \Rightarrow m_{AB} = -\frac{1}{m_{BC}} \Rightarrow \frac{y}{-1} = -\frac{1}{\frac{y}{2}} \Rightarrow \frac{y}{-1} = -\frac{2}{y} \Rightarrow y^2 = 2 \Rightarrow y = \pm\sqrt{2}$

9 $AB = \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{9 + 16} = 5$ $BC = \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{4 + 9} = 5$ $\text{Area } ABC = \frac{1}{2} \times 5 \times 5 = \frac{25}{2}$

11 $m_1 + (m^2 - 1)y = 3 \Rightarrow y = \frac{-3}{(m^2 - 1)}x + \frac{3}{m^2 - 1}$ (4)

12 $\tan \theta = \frac{y}{x} = \frac{1}{\sqrt{3}} \Rightarrow \sqrt{3} = \frac{y}{x} \Rightarrow y = \sqrt{3}x$ $\sqrt{3}m^2 - \sqrt{3} = 3m \Rightarrow \sqrt{3}m^2 + 3m - \sqrt{3} = 0$

13 $m^2 + 3m - 3 = 0 \Rightarrow m = \frac{-3 \pm \sqrt{9 + 12}}{2} = \frac{-3 \pm \sqrt{21}}{2}$

15 $A(1, 4)$ $m_{BC} = \frac{11-3}{1-3} = \frac{8}{-2} = -4$ (5)

16 $BC: y = 4x + b$ $3 = 4(1) + b \Rightarrow b = -1$ $BC: y = 4x - 1$

17 $BE: y = 4x - 1$ $CE: y = 4x - 1$

18 $AB: y = 4x - 1$ $AC: y = 4x - 1$

20 $AB: y + 4x = 1 \Rightarrow y = -4x + 1$ (6)

21 $BC: y = 4x - 1$ $AC: y = 4x - 1$

22 $BE: y = 4x - 1$ $CE: y = 4x - 1$

23 $AB: y = 4x - 1$ $AC: y = 4x - 1$

26 $d: y = ax + b$ $(0, -4) \Rightarrow y = ax - 4$ (7)

27 $-4 = \frac{3}{4}a - 4 \Rightarrow a = 0$ $y = -4$

28 $d: y = -4$

29 $d: y = -4$

TANDIS

(b) $y - ax = 1 \rightarrow y = ax + 1$ (1)
 $ay - x = a - 1 \rightarrow y = \frac{1}{a}x + \frac{a-1}{a}$ (2)
 $y = x \rightarrow y = x$ (3)
 $y = x + 1$ (4)
 $y = -x + 1$ (5)

$(0)(-1) + (1)(1) + 0 = 1$ (6)
 $(1)(1) + (1)(1) + (1)(1) = 3$ (7)
 $\frac{1}{3} = \frac{1}{3}$ (8)

$(1)(1) + (-1)(-1) + (-1)(0) = 2$ (9)
 $\frac{2}{2} = 1$ (10)
 $y = x + 1$ (11)
 $y = -x + 1$ (12)
 $\frac{1}{2}x - \frac{1}{2} = -x + 1 \rightarrow \frac{3}{2}x = \frac{3}{2} \rightarrow x = 1$ (13)
 $y = 1$ (14)

$\begin{vmatrix} 3/2 & 0/2 & 1 \\ 1 & 0 & 1 \\ 1 & 0 & 1 \end{vmatrix} = 3/2 - 0/2 = 3/2$ (15)

$(-1/a) \Delta (1/b)$ (16)
 $\frac{b-a}{1/a + 1/b} = \frac{b-a}{\frac{b+a}{ab}} = \frac{b-a}{1} \cdot \frac{ab}{b+a} = \frac{ab(b-a)}{b+a}$ (17)

$\frac{ab(b-a)}{b+a} = \frac{ab(b-a)}{b+a}$ (18)
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