

19, 20

حساب

19. المثلث

المثلث

B. دقة

$$m = \frac{1+4}{1-2} = -3 \Rightarrow m' = \frac{1}{3} \quad y = \frac{1}{3}x + b \quad (1)$$

$$A(1, 2) \Rightarrow \left(\frac{1+4}{1}, \frac{1+4}{1} \right) \Rightarrow (1, 1) \quad 1 = \frac{1}{3}x + b \quad (2)$$

$$b = \frac{2}{3}$$

$$y = \frac{1}{3}x + \frac{2}{3}$$

$$BC = \sqrt{(-1+4)^2 + (1-2)^2} = \sqrt{5} \quad (3)$$

$$m = \frac{1-2}{-2+1} = \frac{-1}{-1} = 1 \Rightarrow m' = \frac{1}{1} = 1 \quad y = \frac{1}{1}x + b$$

$$1 = \frac{1}{1}x + b \quad (4)$$

$$x - y - 2 = 0$$

$$b = \frac{1}{1}$$

$$AH = \frac{|1 \times 1 - 1 \times 2 - 2|}{\sqrt{1^2 + 1^2}} = \frac{3}{\sqrt{2}} = \frac{3\sqrt{2}}{2} \quad \Delta = \frac{1}{2} \times \frac{3\sqrt{2}}{2} \times \frac{3\sqrt{2}}{2}$$

$$\begin{cases} x + y - 2 = 0 \\ x - y - 2 = 0 \end{cases} \quad \frac{x}{1} = \frac{-1}{-1} = 1 \quad a = 1$$

$$r = \frac{1}{\sqrt{1^2 + 1^2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$S = \pi r^2$$

$$\frac{9}{2} \pi$$

TANDIS

$$m_2(r, r) \quad m_{BA} = \frac{r-1}{r-2} = \frac{r}{-r} = -1$$

(8)

$$m = 1$$

$$y = m + b \quad \rightarrow \quad -r = -1 + b \Rightarrow b = -r$$

$$d = \frac{|r - r + r|}{\sqrt{1 + 1^2}} = \frac{r}{\sqrt{2}}$$

$$y - m + r = 0$$

(1, \sqrt{2})

$$(\omega - m)y = -(rm - r)m + v$$

$$-(rm - 2)y = -(m + 1)m - 1$$

(9)

(5)

$$\frac{-rm + r}{\omega - m} = \frac{rm - 2}{m - 1} \rightarrow \omega m^2 - 1rm + 1\omega = 0$$

$$\Delta < 0$$

طوبه

$$\begin{cases} x + ry = r \\ y - rm = -1 \end{cases}$$

$$\begin{cases} m + ry = r \\ n + y = 2 \end{cases}$$

$$\begin{cases} y - rm = -1 \\ m + y = 2 \end{cases}$$

(10)

(1, \sqrt{2})

$$\omega y = \omega$$

$$y = 1 \quad m = 1$$

$$A = \sqrt{(1, 1)}$$

$$y = -1$$

$$m = \omega$$

$$B = (\omega - 1)$$

$$-rm = -\omega$$

$$m = \frac{\omega}{r}$$

$$y = \frac{r}{r}$$

$$m_2\left(\frac{r}{r}, \frac{r}{r}\right)$$

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

$$C = \left(\frac{r}{r}, \frac{r}{r}\right)$$

TANDIS

$$m_{BC} = \frac{\frac{1}{r} + 1}{\frac{1}{r} - \omega} = \frac{\frac{1}{r} + 1}{-\frac{1}{r}} = -1$$

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$$y = -m + b \xrightarrow{B} -1 = a + b \rightarrow b = -\varepsilon \quad y = -m + \varepsilon$$

$$d = \frac{|1 + 1 - \varepsilon|}{\sqrt{1^2 + 1^2}} = \frac{2 - \varepsilon}{\sqrt{2}} \quad \frac{Am}{AH} = \frac{\frac{2 - \varepsilon}{\sqrt{2}}}{\frac{2 - \varepsilon}{\sqrt{2}}} = 1$$

$$\frac{|y + \frac{1}{r}x - b|}{\sqrt{a^2 + b^2}} = \sqrt{r_0} \rightarrow \frac{|-b|}{\sqrt{\frac{a}{\varepsilon}}} = \sqrt{r_0} \quad (\checkmark)$$

$$|-b| = \frac{\sqrt{a}}{r} \times \sqrt{\varepsilon} = a \quad |b| = a \quad b = -a \quad (\checkmark)$$

$$y = -\frac{1}{r}x - a \quad a = -\frac{1}{r}x - a \quad x = -10 \quad A = (-10, 0)$$

$$y = -\frac{1}{r}x + a \quad a = -\frac{1}{r}x + a \quad x = 10 \quad B = (0, a)$$

$$AB = \sqrt{(a - 0)^2 + (10 - 0)^2} = \sqrt{10a} \quad A = (+10, 0) \quad B = (0, a)$$

برای پیدا کردن
 a

$$y = (1 - m)x + r \rightarrow m = \frac{-r}{1 + m} \quad (1)$$

$$y = \frac{\varepsilon}{m}x + r \rightarrow m = -\frac{r}{\varepsilon}$$

$$\frac{-m^2 + m + \varepsilon}{r - rm} = \pm \frac{a}{r} \quad m = r \quad m = -r \pm \sqrt{a} \quad (\checkmark)$$

$$(-r + \sqrt{a})(-r - \sqrt{a})(r) = -r$$

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1

$$\frac{\alpha + 0}{r} = r \quad \alpha = \varepsilon$$

$$u = 0 \rightarrow y = -r \quad (4)$$

2

3

$$\frac{\beta - r}{r} = -r \quad \beta = -1$$

$$y = rm + r = 0 \quad (5)$$

4

5

$$y + 1 = r(u - \varepsilon)$$

$$m = \frac{r}{1} = r$$

6

7

$$y + 1 = rm - 1$$

8

$$y = rm - 2$$

9

10

$$MAA' = -1 \rightarrow y = -x + b \quad r = -1 + b \quad b = r$$

$$y = -x + r$$

$$y = x + a$$

$$y = -x + r$$

$$\frac{r+b}{r} = 2$$

$$x = -1, y = 2$$

$$b = 9$$

$$rb - a = 1r + r = 10$$

$$\frac{1+a}{r} = -1 \quad a = -r$$