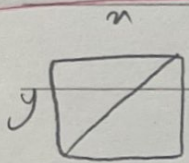


$$\frac{x_1}{y} = \frac{\omega}{\varepsilon} \rightarrow x_1 = \frac{\omega}{\varepsilon} y$$

$$\frac{x_2}{y} = \frac{1+\sqrt{5}}{2} \Rightarrow x_2 = \frac{1+\sqrt{5}}{2} y$$

$$\frac{s_2}{s_1} = \frac{x_2 y}{x_1 y} = \frac{x_2}{x_1} = \frac{\frac{1+\sqrt{5}}{2} y}{\frac{\omega}{\varepsilon} y} = \frac{\varepsilon(1+\sqrt{5})}{\omega} = \boxed{\frac{2+2\sqrt{5}}{5}}$$



$$h = \sqrt{x^2 + y^2} \rightarrow \frac{\sqrt{x^2 + y^2}}{x} = \frac{1+\sqrt{5}}{2}$$

$$\Rightarrow (1+\sqrt{5})/x = 2\sqrt{x^2 + y^2} \quad (*) \quad (4+2\sqrt{5})x^2 = \varepsilon x^2 + \varepsilon y^2 \rightarrow$$

$$(2+2\sqrt{5})x^2 = \varepsilon y^2 \rightarrow \left(\frac{x}{y}\right)^2 = \frac{\varepsilon}{2+2\sqrt{5}} = \frac{2}{1+\sqrt{5}} \times \frac{1-\sqrt{5}}{1-\sqrt{5}} = \frac{2-2\sqrt{5}}{1-5}$$

$$\rightarrow \boxed{\frac{\sqrt{5}-1}{2}}$$

$$|a| + \sqrt{a^2 + \varepsilon a} = 2 \rightarrow \sqrt{a^2 + \varepsilon a} = 2 - |a| \quad (*) \quad a^2 + \varepsilon a = 4 - 4|a| + a^2$$

$$\rightarrow \underbrace{va^2 - 4a + \varepsilon = 0}_{\text{X}} \rightarrow (a - 1\varepsilon)(a - 2) = 0 \rightarrow a = \frac{2}{\varepsilon}$$

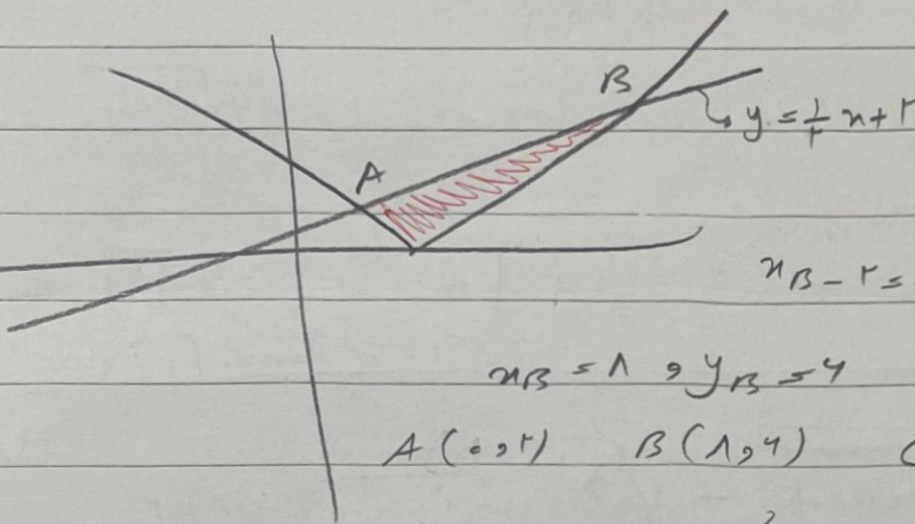
$$a = \frac{1\varepsilon}{\varepsilon} \rightarrow \text{مطلوب}$$

$$\frac{a+1}{a} = \frac{\frac{2}{\varepsilon} + 1}{\frac{2}{\varepsilon}} = \boxed{\frac{2+\varepsilon}{2}}$$

$$y = \sqrt{x^2 - 2x + 2} = |x - 1|$$

$$y = |x - 1|$$

-9



$$x_B - 1 = \frac{1}{4} x_B + 2 \Rightarrow \frac{1}{4} x_B = 3$$

$$x_B = 12 \Rightarrow y_B = 4$$

$$A(0, 2) \quad B(12, 4) \quad C(5, 0)$$

$$\rightarrow \begin{bmatrix} 0 & 12 & 4 \\ 2 & 4 & 0 \\ 1 & 1 & 1 \end{bmatrix} \rightarrow 0 + 12 - 12 - 12 = -12$$

$$S = \frac{1}{4} \times 12 \times 4 = 12$$

$$-x^2 + 4x - 1 \geq 0 \rightarrow (x - 1)(x - 3) \leq 0$$

$$\frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4}$$

از سوال 12

①. ②

$$D_f = \{x\} \rightarrow x = 4$$

$$\sqrt{x} + \sqrt{x^2} = 2 + 4 = 6 = x + 2$$

[12] ②

$$x = \frac{1}{n}$$

$$\rightarrow \frac{1}{n+9}$$

$$\frac{1}{n} + \frac{1}{n+9} \leq \frac{1}{4}$$

-10

$$\rightarrow 40x + 180 \leq x^2 + 9x \Rightarrow x^2 - 31x - 180 \leq 0$$

$$\rightarrow (x - 34)(x + 5) = 0 \rightarrow x = -5$$

$$x = 34$$

