

$$\begin{array}{c}
 \begin{array}{c|c|c}
 -1 & & 1 \\
 \hline
 -2n-1 & 2 & 2n+1
 \end{array} \\
 -\frac{1}{2}n + \frac{1}{2} = -2n-1 & -\frac{1}{2}n + \frac{1}{2} = 2 & -\frac{1}{2}n + \frac{1}{2} = 2n+1 \\
 \frac{1}{2}n = -\frac{5}{2} \Rightarrow \textcircled{-5}, \checkmark & \frac{1}{2}n = \frac{3}{2} \Rightarrow \textcircled{3}, \checkmark & \frac{1}{2}n = \frac{3}{2} \Rightarrow 2n+1 \\
 \frac{1}{2}n = \frac{3}{2} \Rightarrow n = 3 & \frac{1}{2}n = \frac{3}{2} \Rightarrow n = 3 & \frac{1}{2}n = \frac{3}{2} \Rightarrow n = 3
 \end{array}$$

$$\begin{array}{c}
 V = |n-2| \\
 V = \frac{1}{2}n + 2 \\
 \begin{array}{c}
 \text{Graph of } V = |n-2| \text{ and } V = \frac{1}{2}n + 2 \\
 \text{Intersection at } n = 6 \\
 \text{Intersection at } n = -2
 \end{array} \\
 \frac{1}{2}n + 2 = 0 \Rightarrow \frac{1}{2}n = -2 \Rightarrow n = -4
 \end{array}$$

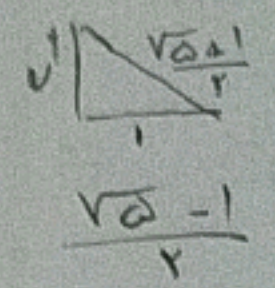
$$B = \frac{1}{F-9} \Rightarrow \frac{1}{F-9} + \frac{1}{F} = \frac{1}{2} \Rightarrow \frac{F+F-9}{F^2-9F} = \frac{1}{2} \Rightarrow \frac{2F-9}{F^2-9F} = \frac{1}{2}$$

$$\begin{array}{c}
 \leftarrow F - 18 = F^2 - 9F \Rightarrow F^2 - 9F + 18 = 0 \quad (F-6)(F-3) \\
 \leftarrow F = 6 \Rightarrow F = 6 \Rightarrow B = \frac{1}{2} \\
 \leftarrow F = 3 \Rightarrow F = 3 \Rightarrow B = \frac{1}{2}
 \end{array}$$

$$\begin{array}{c}
 \sqrt{n + \sqrt{-n^2 + 4n + 1}} + \sqrt{n + \sqrt{-n^2 + 4n + 1}} = n + 2 \\
 n^2(-n+4) + 4n(n-1) = (n-2)(n-1) \\
 (n-2)(-n^2+4n) = \frac{1}{2} - \frac{1}{2} \\
 \frac{-n^2+4n}{2} = \frac{1}{2} - \frac{1}{2} \\
 \frac{-n^2+4n}{2} = 0 \Rightarrow n = 0 \text{ or } n = 4 \\
 \frac{1}{2}n = \frac{1}{2} \Rightarrow n = 1 \\
 \frac{1}{2}n = \frac{1}{2} \Rightarrow n = 1
 \end{array}$$

$$\lambda = \frac{db}{da} \Rightarrow \frac{da + m}{da} = \frac{1 + \sqrt{a}}{2} \Rightarrow 1 + m = \frac{1 + \sqrt{a}}{2} \Rightarrow m = \frac{1 + \sqrt{a}}{2} - 1 = \frac{1 + \sqrt{a} - 2}{2} = \frac{\sqrt{a} - 1}{2}$$

طول وتر = $\frac{\sqrt{a} + 1}{2}$



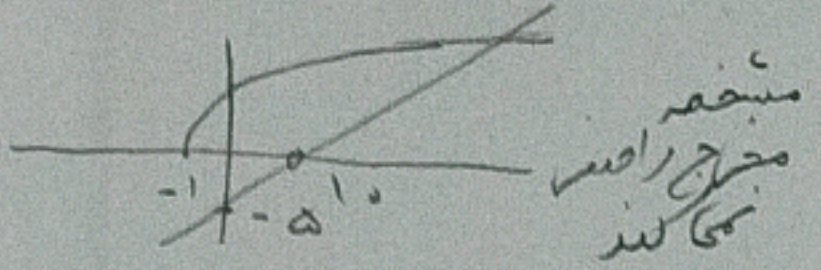
$$\sqrt{a^2 + 1} = \frac{\sqrt{a} + 1}{2} \Rightarrow \sqrt{a^2 + 1} = \frac{1 + \sqrt{a}}{2} \Rightarrow \sqrt{a^2 + 1} = \frac{1 + \sqrt{a}}{2} \Rightarrow \sqrt{a^2 + 1} = \frac{1 + \sqrt{a}}{2} \Rightarrow \sqrt{a^2 + 1} = \frac{1 + \sqrt{a}}{2}$$

$$\frac{a+1}{a} = \frac{1 + \sqrt{a}}{1} \Rightarrow a + 1 = 1 + \sqrt{a} \Rightarrow a = \sqrt{a} \Rightarrow a^2 = a \Rightarrow a(a-1) = 0 \Rightarrow a = 0 \text{ or } a = 1$$

$$\frac{\frac{1}{\sqrt{a}} + \frac{1}{\sqrt{a}}}{\frac{1}{\sqrt{a}}} = \frac{2}{1} = 2$$

$$\frac{\sqrt{a+1}}{\sqrt{a-1} + 2} - \frac{\sqrt{a+1}}{2 - \sqrt{a-1}} = \frac{a-1}{\sqrt{a-1}} \Rightarrow \frac{\sqrt{a+1}(2 - \sqrt{a-1}) - \sqrt{a+1}(\sqrt{a-1} + 2)}{(2 - \sqrt{a-1})(2 - \sqrt{a-1})} = \frac{a-1}{\sqrt{a-1}}$$

$$\frac{-2\sqrt{a+1} + \sqrt{a+1}\sqrt{a-1}}{4 - 2\sqrt{a-1}} = \frac{a-1}{\sqrt{a-1}} \Rightarrow -2\sqrt{a+1} + \sqrt{a+1}\sqrt{a-1} = \frac{a-1}{\sqrt{a-1}} \Rightarrow \sqrt{a+1} = \frac{a-1}{\sqrt{a-1} - 2}$$



یک جواب مثبت دارد

$$\frac{1}{\sqrt{2-a} + 2} - \frac{1}{2 - \sqrt{2-a}} = \frac{2-a}{2\sqrt{2-a}} \Rightarrow \frac{2 - \sqrt{2-a} - (\sqrt{2-a} + 2)}{(2 - \sqrt{2-a})(2 - \sqrt{2-a})} = \frac{2-a}{2\sqrt{2-a}}$$

$$\frac{-2\sqrt{2-a}}{4 - 2\sqrt{2-a}} = \frac{2-a}{2\sqrt{2-a}} \Rightarrow \frac{-2}{2 - \sqrt{2-a}} = \frac{2-a}{\sqrt{2-a}} \Rightarrow -2 = \frac{2-a}{\sqrt{2-a}} \Rightarrow -2\sqrt{2-a} = 2-a \Rightarrow 4 - 4\sqrt{2-a} = 4 - 2a \Rightarrow -4\sqrt{2-a} = 4 - 2a \Rightarrow 4\sqrt{2-a} = 2a - 4 \Rightarrow 2\sqrt{2-a} = a - 2 \Rightarrow 4(2-a) = (a-2)^2 \Rightarrow 8 - 4a = a^2 - 4a + 4 \Rightarrow 4 = a^2 \Rightarrow a = 2$$

مستند ندارد / مسئله جواب ندارد

$$\frac{1}{a^2} + \frac{1}{(1-a)^2} = \frac{16}{9} \Rightarrow \frac{(1-a)^2 + a^2}{a^2(1-a)^2} = \frac{16}{9} \Rightarrow \frac{1 - 2a + a^2 + a^2}{a^2(1-a)^2} = \frac{16}{9} \Rightarrow \frac{1 - 2a + 2a^2}{a^2(1-a)^2} = \frac{16}{9}$$

$$\Rightarrow \frac{1 - 2a + 2a^2}{a^2(1-a)^2} = \frac{16}{9} \Rightarrow 9(1 - 2a + 2a^2) = 16a^2(1-a)^2$$

$$9(1 - 2a + 2a^2) = 16a^2(1-a)^2 \Rightarrow 9(1 - 2a + 2a^2) = 16a^2(1 - 2a + a^2)$$

$$\frac{9}{16} = \frac{1 - 2a + 2a^2}{a^2(1-a)^2} \Rightarrow \frac{9}{16} = \frac{1 - 2a + 2a^2}{a^2(1-a)^2}$$

$$\frac{9}{16} = \frac{1 - 2a + 2a^2}{a^2(1-a)^2} \Rightarrow \frac{9}{16} = \frac{1 - 2a + 2a^2}{a^2(1-a)^2}$$

$$a^2 - a = \frac{3}{10} \Rightarrow \textcircled{1}$$

$$\Rightarrow \textcircled{2}$$

$$a^2 - a = \frac{3}{19} \Rightarrow \textcircled{1}$$

و اما در جواب این مسئله (در صورتی که مسئله)