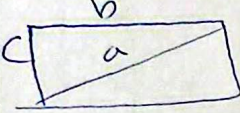


$$\frac{n}{y} = \frac{0}{\varepsilon} \Rightarrow \varepsilon n = 0 y \Rightarrow y = \frac{\varepsilon}{0} n \Rightarrow n' = \frac{\sqrt{5}+1}{2} y \Rightarrow n' = \frac{\sqrt{5}+1}{2} \times \frac{\varepsilon}{0} n =$$

$$\frac{\sqrt{5}+1}{0} n \Rightarrow \frac{n'y}{ny} = \frac{\frac{\sqrt{5}+1}{2} n}{n} = \frac{\sqrt{5}+1}{2}$$


 $a^2 = b^2 + c^2$
 $\frac{a}{b} = \frac{1+\sqrt{5}}{2} \Rightarrow a = \frac{b(1+\sqrt{5})}{2} \Rightarrow a^2 = \frac{b^2(1+\sqrt{5})^2}{4} = b^2 + c^2$
 $\varepsilon b^2 + 2\sqrt{5}b^2 = \varepsilon b^2 + \varepsilon c^2 \Rightarrow 2b^2 + 2\sqrt{5}b^2 = \varepsilon c^2 \Rightarrow \frac{b^2(1+\sqrt{5})^2}{4} = c^2 \Rightarrow \sqrt{\frac{b^2(1+\sqrt{5})^2}{4}} = c$
 $\left(\frac{b}{c}\right)^2 = \left(\frac{b}{\sqrt{\frac{b^2(1+\sqrt{5})^2}{4}}}\right)^2 = \frac{b^2}{\frac{b^2(1+\sqrt{5})^2}{4}} = \frac{4b^2}{b^2(1+\sqrt{5})^2} = \frac{4}{(1+\sqrt{5})^2} = \frac{4}{1+2\sqrt{5}+5} = \frac{4}{6+2\sqrt{5}} = \frac{2}{3+\sqrt{5}} = \frac{2(3-\sqrt{5})}{(3+\sqrt{5})(3-\sqrt{5})} = \frac{2(3-\sqrt{5})}{9-5} = \frac{2(3-\sqrt{5})}{4} = \frac{3-\sqrt{5}}{2}$

$$d - Ca = \sqrt{2a^2 - \varepsilon a} \xrightarrow{\quad} \varepsilon + 9a^2 - 12a = 2a^2 + \varepsilon a \Rightarrow \sqrt{a^2 - 12a + 6} = \Rightarrow$$

$$a^2 - 12a + 6 = 0 \rightarrow (a-1)(a-11) \rightarrow \frac{1}{11} \text{ و } \frac{1}{11}$$

$$\frac{\sqrt{n-1} - \sqrt{n^2-1} - \sqrt{n^2-1} - c\sqrt{n-1}}{1-n} = \sqrt{n-1} \Rightarrow \frac{-2\sqrt{n+1}}{1-n} = 1$$

$$\Rightarrow -2\sqrt{n+1} = 1-n \Rightarrow 2\sqrt{n+1} = n-1 \Rightarrow \varepsilon n + \varepsilon = n^2 - 2n + 1 \Rightarrow n^2 - 4n + 9 = 0$$

$$n = \frac{4 \pm \sqrt{16-36}}{2} = 2 \pm \sqrt{-10} = 2 \pm i\sqrt{10}$$

$$\frac{\sqrt{2-n} - \sqrt{2-n} - \sqrt{2-n} - \sqrt{2-n}}{\varepsilon - 2 + \sqrt{2+n}} = \frac{-2\sqrt{2+n}}{2+n} = \frac{2-n}{0\sqrt{2+n}} \Rightarrow \varepsilon - n^2 = -1 \cdot (2-n)$$

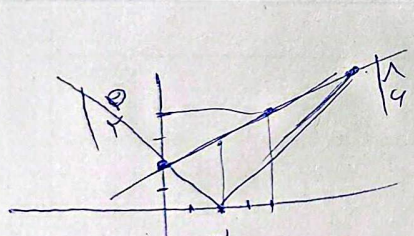
$$\varepsilon - n^2 = -2 + 1 \cdot n \Rightarrow n^2 + 1 \cdot n - 2 = (n+2)(n-1)$$

6

7

$$y = |x+2| + |x-1|$$

$x < -2 \rightarrow -x-2 -x-1 = -2x-3 \rightarrow \frac{-x+1}{x} = -2x-3 \Rightarrow 0 = -2x-3 \Rightarrow x = -1.5$
 $-2 < x < 1 \rightarrow -x-2 + x-1 = -3$
 $x > 1 \rightarrow x+2 + x-1 = 2x+1 \rightarrow \frac{-x+1}{x} = 2x+1 \Rightarrow x = 1$
 $x > 1 \rightarrow 2x+1 > 0$



$x < -2 \rightarrow -x-2 -x-1 = -2x-3$
 $-2 < x < 1 \rightarrow -x-2 + x-1 = -3$
 $x > 1 \rightarrow x+2 + x-1 = 2x+1$

$y = \sqrt{x^2 - 4x + 4} + \sqrt{x^2 - 2x + 1} = |x-2| + |x-1|$
 $x \geq 2 \rightarrow x-2 + x-1 = 2x-3$
 $x < 2 \rightarrow -x+2 + x-1 = 1$

$\frac{1}{n} \rightarrow \frac{1}{n} \rightarrow \frac{1}{n}$
 $\frac{1}{n-1} \rightarrow \frac{1}{n-1} \rightarrow \frac{1}{n-1}$
 $\frac{1}{n-2} \rightarrow \frac{1}{n-2} \rightarrow \frac{1}{n-2}$

$\frac{1}{n-1} + \frac{1}{n-2} \leq \frac{1}{n-3} \Rightarrow \frac{n-2 + n-1}{(n-1)(n-2)} \leq \frac{1}{n-3}$
 $(n-1)(n-2) \leq n-3 \Rightarrow n^2 - 3n + 2 \leq n-3 \Rightarrow n^2 - 4n + 5 \leq 0$
 $(n-2)(n-3) \leq 0 \Rightarrow n \in [2, 3]$