

1.78  
4

$$(x-1)\sqrt{x^2+x+2} \geq x^3-x$$

( $\Delta < 0$ )  $\times$   $\sqrt{\Delta}$   $\rightarrow$   $x^2+x+2 < 0$

$$(x-1)\sqrt{x^2+x+2} \geq x(x^2-1)$$

$$(x-1)\sqrt{x^2+x+2} \geq x(x-1)(x+1)$$

$$(x-1)[\sqrt{x^2+x+2} - x(x+1)] \geq 0$$

$$\swarrow$$

$x=1$

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

$$x^2+x=A \quad (no)$$

$$\sqrt{A+2} = A \quad (1)^2$$

$$A+2 = A^2$$

$$A^2 - A - 2 = 0 \rightarrow A = 2, A = -1$$

$$A=2: \quad \begin{aligned} x^2+x &= 2 \\ x^2+x-2 &= 0 \end{aligned}$$

$$\begin{aligned} x &= -2 \\ x &= 1 \end{aligned}$$

$$\begin{aligned} x^2+x &= -1 \\ x^2+x+1 &= 0 \end{aligned}$$

$\emptyset$

( $\Delta < 0$ )  $\times$   $\sqrt{\Delta}$   $\rightarrow$   $x^2+x+2 < 0$

$$\begin{array}{c} + \\ \hline -2 \quad - \quad 1 \quad - \end{array}$$

$$\boxed{x=1 \quad \vee \quad x \leq -2} : \text{אולי}$$