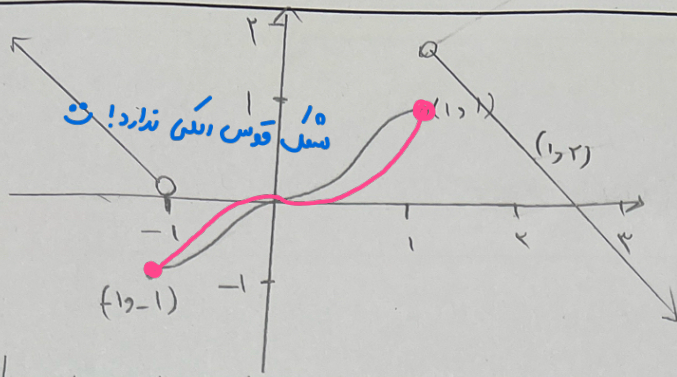




۷) ارفاق

۶

الف)

$P(n)$	-	0	+	0	-	0	+
--------	---	---	---	---	---	---	---

ب)

$P(n)$	+	0	-	0	-	0	+
--------	---	---	---	---	---	---	---

۷

الف)

$P(n)$	-	0	+	0	-	0	+
--------	---	---	---	---	---	---	---

ب)

$P(n)$	+	0	-	0	-	0	+
--------	---	---	---	---	---	---	---

۸

الف)

$P(n)$	+	0	-	0	-	0	+
--------	---	---	---	---	---	---	---

$$\frac{(n+2)(n-1)^2}{n-3}$$

۹

ب)

$P(n)$	+	0	+	0	-	0	+
--------	---	---	---	---	---	---	---

$$\frac{(n-1)(n-2)}{(n-1)(n-3)}$$

الف)

$P(n)$	+	0	-	0	-	0	+
--------	---	---	---	---	---	---	---

$$\frac{n^2(n^2-1)}{-2n^2+n+2} \triangleleft \Delta < 0$$

۱۰

ب)

$P(n)$	+	0	+	0	-	0	+
--------	---	---	---	---	---	---	---

$$\frac{(\Delta < 0)}{(\Delta < 0)} + = +$$

۷) $\Delta < 0$ $\checkmark$ $n \in \mathbb{R}$

۱۹۷۵ آذرین

الف) $y_1^3 = 2x_1^3 - 1$ $\xrightarrow{x_1=x_2}$ $y_1^3 = -1$ $\rightarrow$ $y_1 = y_2$ تابع هست
 $y_2^3 = 2x_2^3 - 1$ $\rightarrow$ $y_2^3 = -1$

ب) $y_1^3 + y_1 = 2x_1^3 - 1$ $\xrightarrow{x_1=x_2}$ $y_1^3 + y_1 = -1$ $\left\{ \begin{array}{l} y_1^3 + y_1 - y_2^3 - y_2 = 0 \\ y_2^3 + y_2 = -1 \end{array} \right.$ $\rightarrow$ $(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + y_1 + y_2 + 1) = 0$
 $y_2^3 + y_2 = 2x_2^3 - 1$ $\Rightarrow y_1 = y_2$ ✓ تابع هست همیشه هست

الف) $y_1 = x_1^2 - 1$ $\xrightarrow{x_1=x_2}$ $y_1 = -1$ $\rightarrow$ $y_1 = y_2$ تابع هست
 $y_2 = x_2^2 - 1$ $\rightarrow$ $y_2 = -1$ $\rightarrow$ $y_1 = y_2$ ✓
 ب) $|y_1| = x_1^2 + 1 - x_1$ $\rightarrow$ $|y_1| = 1$ $\rightarrow$ $y_1 = 1$ $\rightarrow$ $y_1 = y_2$ ✓
 نمودار:

الف) $y_1 = 2x_1^3 - 1 + x_1^3$ $\xrightarrow{x_1=x_2}$ $y_1 = -1$ $\rightarrow$ $y_1 = y_2$ ✓
 $y_2 = 2x_2^3 - 1 + x_2^3$ $\rightarrow$ $y_2 = -1$ $\rightarrow$ $y_1 = y_2$ ✓
 ب) $y_1 = 2 - \sqrt[3]{x_1}$ $\xrightarrow{x_1=x_2}$ $y_1 = 2 - \sqrt[3]{x_1}$ $\rightarrow$ $y_1 = y_2$ ✓
 $y_2 = 2 - \sqrt[3]{x_2}$ $\rightarrow$ $y_1 = y_2$ ✓

الف) $y_1 = 2 - \sqrt[3]{x_1}$ $\xrightarrow{x_1=x_2}$ $y_1 = 2 - \sqrt[3]{x_1}$ $\rightarrow$ $y_1 = y_2$ ✓
 $y_2 = 2 - \sqrt[3]{x_2}$ $\rightarrow$ $y_1 = y_2$ ✓
 ب) $y_1 = 2 - \sqrt[3]{x_1}$ $\xrightarrow{x_1=x_2}$ $y_1 = 2 - \sqrt[3]{x_1}$ $\rightarrow$ $y_1 = y_2$ ✓
 $y_2 = 2 - \sqrt[3]{x_2}$ $\rightarrow$ $y_1 = y_2$ ✓

الف) $\tan = \frac{\sin}{\cos} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$

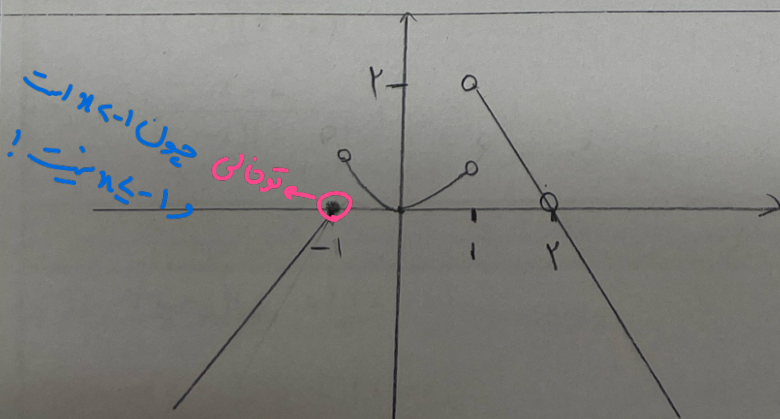
تعریف نرسه $\rightarrow \frac{-1}{\frac{1}{2}} = -2$

ب) $\cot = \frac{\cos}{\sin} = \frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}} = -\sqrt{3}$

ج) $\frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$

الف) $\sin \alpha = \frac{1}{2}$ $\alpha = \frac{\pi}{6}, \frac{5\pi}{6}$

ب) $\cos \alpha = \frac{\sqrt{2}}{2}$ $\alpha = \frac{\pi}{4}, \frac{7\pi}{4}$



۱۷۵

a-

