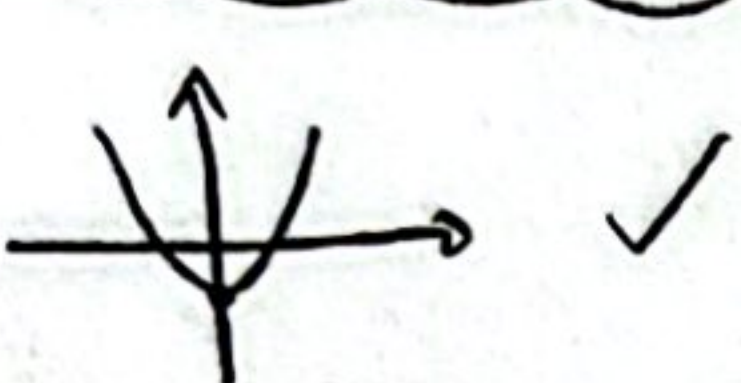


الف) $\left. \begin{matrix} y_1^3 = 2n_1^2 - 1 \\ y_2^3 = 2n_2^2 - 1 \end{matrix} \right\} \xrightarrow{n_1=n_2} y_1^3 = y_2^3 \rightarrow y_1 = y_2 \checkmark$

ب) $\left. \begin{matrix} y_1^3 + y_2 = 3n_1^2 - 1 \\ y_2^3 + y_1 = 3n_2^2 - 1 \end{matrix} \right\} \xrightarrow{n_1=n_2} y_1^3 + y_2 = y_2^3 + y_1 \rightarrow y_1^3 - y_2^3 + y_2 - y_1 = 0 \checkmark$
 $(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2) + (y_2 - y_1) = 0 \rightarrow (y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 - 1) = 0$
 $\left. \begin{matrix} y_1 - y_2 = 0 \rightarrow y_1 = y_2 \\ y_1^2 + y_1 y_2 + y_2^2 - 1 = 0 \end{matrix} \right\} \rightarrow y_1 = \frac{-y_2 \pm \sqrt{y_2^2 - 4}}{2}$

مشتقات $\Delta = 0 \rightarrow y_1 = \frac{-y_2 \pm \sqrt{y_2^2 - 4}}{2}$

الف)  $\checkmark$

ج) $\left. \begin{matrix} y_1^3 + n_1^3 = 2n_1 - 1 \\ y_2^3 + n_2^3 = 2n_2 - 1 \end{matrix} \right\} \xrightarrow{n_1=n_2} y_1^3 = y_2^3 \rightarrow y_1 = y_2 \checkmark$

ب) $n=0 \rightarrow |y|=1 \rightarrow y = \pm 1 \propto$

د) $\sqrt[3]{y} = 2 - \sqrt{n} \xrightarrow{\text{مربع}} y_1 = (2 - \sqrt{n_1})^3$
 $y_2 = (2 - \sqrt{n_2})^3 \left\} \xrightarrow{n_1=n_2} y_1 = y_2 \checkmark$

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

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

ج) $-\frac{1}{\sqrt{3}} \rightarrow \tan = \frac{\sin}{\cos} = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$

د) $\cot = \frac{\cos}{\sin} = \frac{-1}{0}$

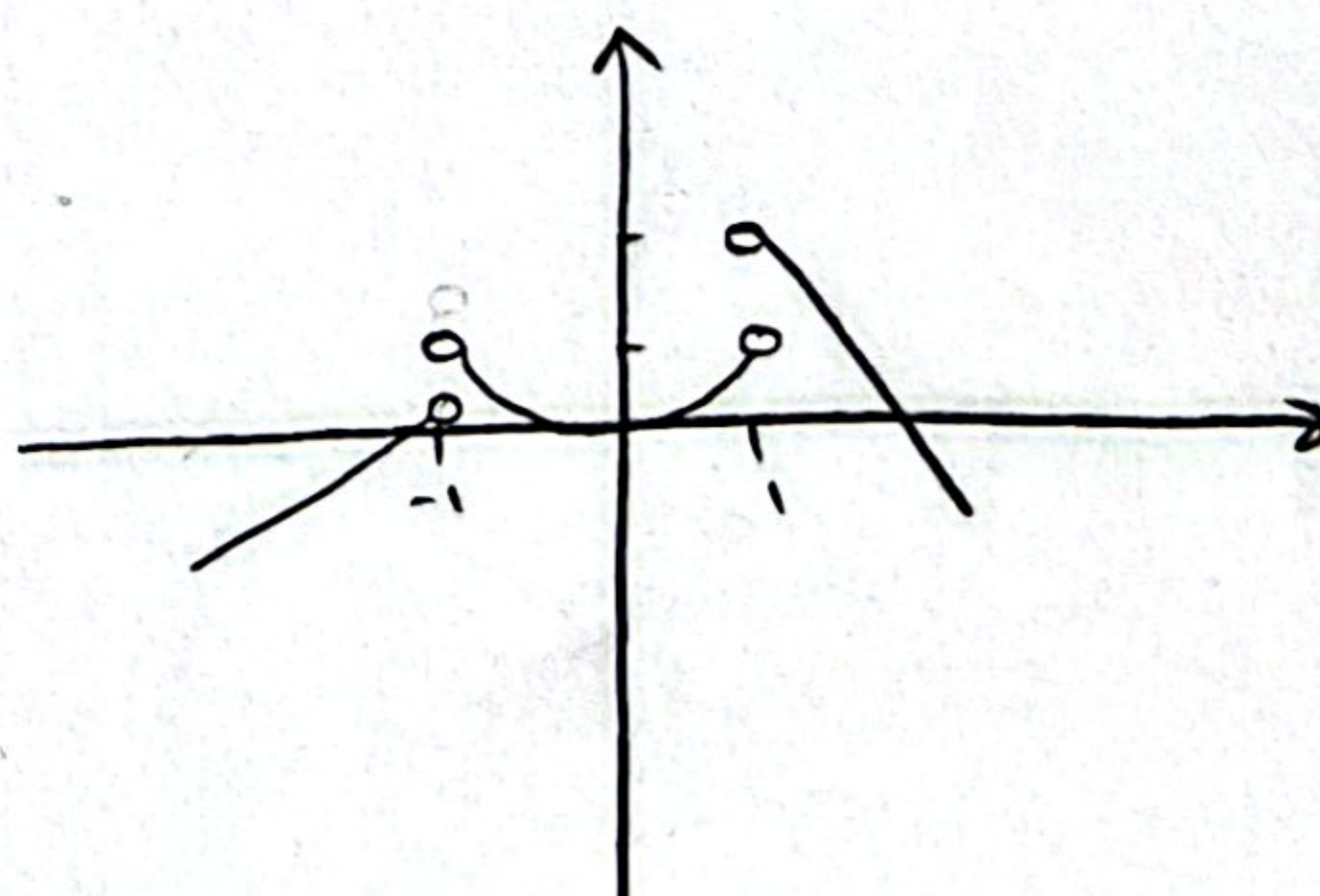
الف) $\frac{\pi}{4}, \frac{5\pi}{4} \rightarrow (2k\pi + \frac{\pi}{4}, 2k\pi + \frac{5\pi}{4})$

ب) $\frac{\pi}{4}, \frac{5\pi}{4} \rightarrow (2k\pi + \frac{\pi}{4}, 2k\pi - \frac{\pi}{4})$

$-2n+4 \rightarrow f(1) : -2+4=2 \rightarrow (1, 2)$

$n^2 \rightarrow n=1 \rightarrow y=1$ و $n=-1 \rightarrow y=1 \rightarrow (1, 1)$ و $(-1, 1)$

$n+1 \rightarrow f(-1) : -1+1=0 \rightarrow (-1, 0)$



$f(1) = -1 + 1^3 = 0 \rightarrow (1, 0)$ $-1 \leq n \leq 1 \rightarrow n = 1 \rightarrow f(1) = 1^3 = 1$ $n = -1 \rightarrow f(-1) = (-1)^3 = -1$ $n = 0 \rightarrow f(0) = 0^3 = 0$ $-n - 1 \rightarrow f(-1) = -(-1) - 1 = 0 \rightarrow (-1, 0)$	۶
الف) $\frac{2}{-p} + \frac{3}{p} - \frac{4}{p} +$ ب) $\frac{2}{+1} - \frac{3}{-1} - \frac{4}{-1} +$	۷
الف) $\frac{2}{-p} + \frac{3}{p} - \frac{4}{p} +$ ب) $\frac{2}{+p} - \frac{3}{p} - \frac{4}{p} +$	۸
الف) $\frac{(1)(2)}{n-3} \quad \frac{1}{-p} + \frac{2}{p} - \frac{3}{p} +$ ب) $\frac{(1)(2)}{(n-1)(n-3)} \quad \frac{1}{+p} + \frac{2}{p} - \frac{3}{p} +$	۹
الف) $\frac{(4)(1)(-1)}{n^2+n+2} \quad \frac{-1}{+p} - \frac{4}{p} - \frac{1}{p} +$ ب) $\frac{n^2+3n+4}{n^2+2n+3} > 0$ نیاز به تعیین علامت نیست همواره مثبت است	۱۰

