

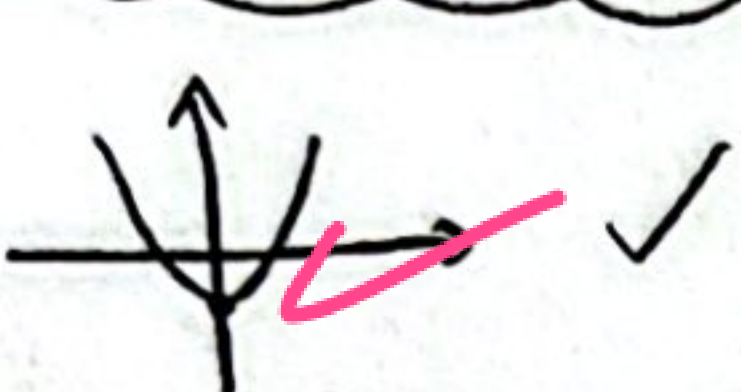
14 فرین

الف) $y_1^3 = 2n_1^2 - 1$
 $y_2^3 = 2n_2^2 - 1$ } $n_1 = n_2 \rightarrow y_1^3 = y_2^3 \rightarrow y_1 = y_2 \checkmark$

ب) $y_1^3 + y_2 = 3n_1^2 - 1$
 $y_2^3 + y_1 = 3n_2^2 - 1$ } $n_1 = n_2 \rightarrow y_1^3 + y_2 = y_2^3 + y_1 \rightarrow y_1^3 - y_2^3 + y_2 - y_1 = 0 \checkmark$

$(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2) + (y_2 - y_1) = 0 \rightarrow (y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 - 1) = 0$
 $y_1 - y_2 = 0 \rightarrow y_1 = y_2$
 $y_1^2 + y_1 y_2 + y_2^2 - 1 = 0 \rightarrow y_1^2 + y_1^2 + y_1^2 - 1 = 0 \rightarrow 3y_1^2 - 1 = 0 \rightarrow y_1 = \pm \frac{1}{\sqrt{3}}$

$y_1 = \frac{-y_2 \pm \sqrt{3y_2^2 - 4}}{2} \rightarrow \Delta = 3y_2^2 - 4$

الف) 

ج) $y_1^3 + n_1^3 = 2n_1 - 1$
 $y_2^3 + n_2^3 = 2n_2 - 1$ } $n_1 = n_2 \rightarrow y_1^3 = y_2^3 \rightarrow y_1 = y_2 \checkmark$

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

د) $\sqrt[n]{y} = 2 - \sqrt[n]{n} \rightarrow y_1 = (2 - \sqrt[n]{n})^n$
 $y_2 = (2 - \sqrt[n]{n_2})^n$ } $n_1 = n_2 \rightarrow y_1 = y_2 \checkmark$

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

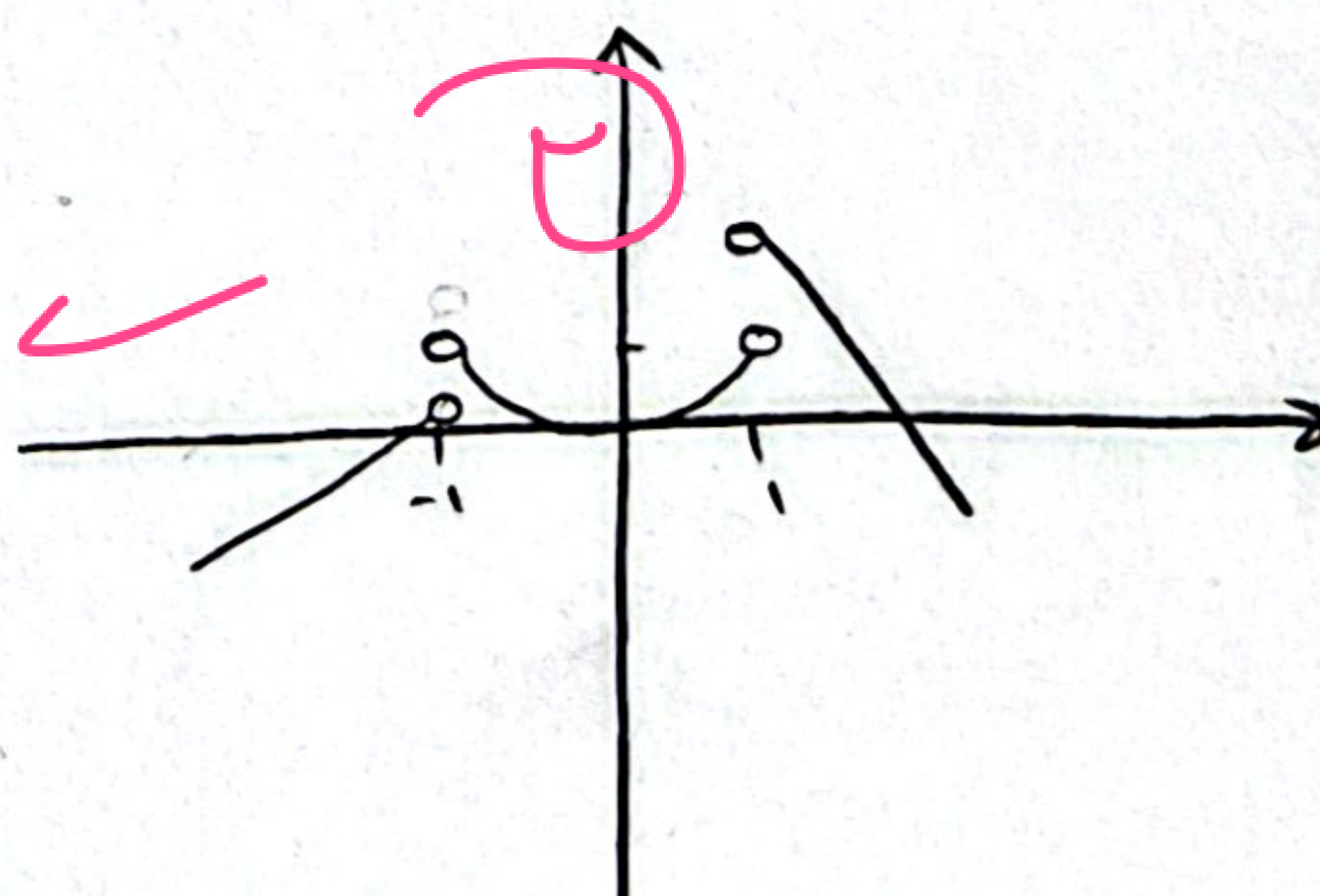
الف) $\frac{\pi}{4}, \frac{5\pi}{4} \rightarrow (2k\pi + \frac{\pi}{4}, 2k\pi + \frac{5\pi}{4})$

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

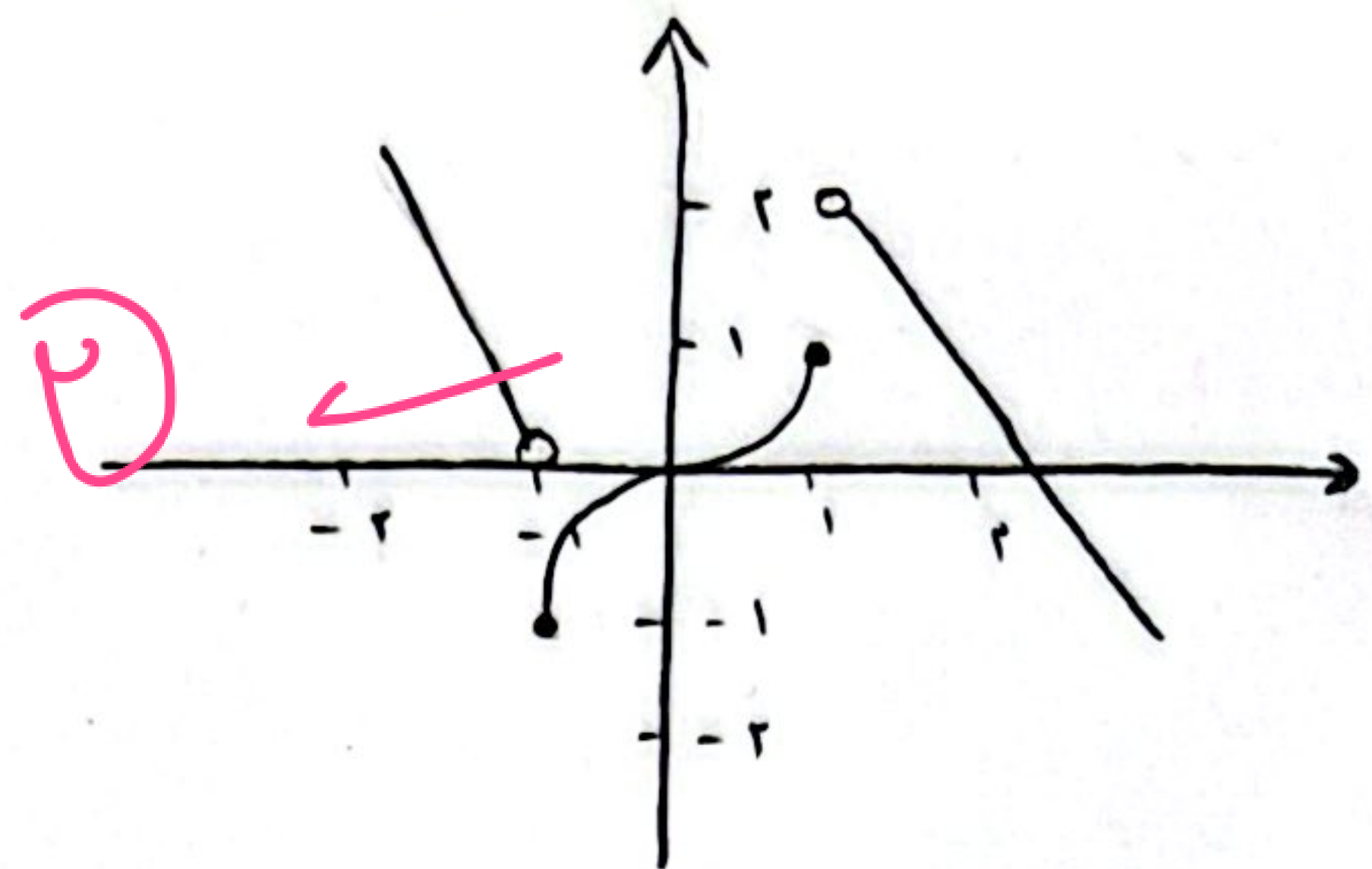
$-2n + 4 \rightarrow f(1) : -2 + 4 = 2 \rightarrow (1, 2)$

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

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



$f(1) = -1 + 3 = 2$ پس $(1, 2)$ $-1 \leq x \leq 1 \rightarrow x=1$ پس $f(1) = 1^3 = 1$ $x=-1$ پس $f(-1) = (-1)^3 = -1$ $x=0$ پس $f(0) = 0^3 = 0$ $x=-1$ پس $f(-1) = -(-1) - 1 = 0$ پس $(-1, 0)$	۶
الف) $\frac{2}{-p} + \frac{3}{p} + \frac{4}{p} +$ ب) $\frac{2}{+p} - \frac{3}{-p} - \frac{4}{-p} +$ ۱,۷۵ صفرها را یادداشت نره بذار!	۷
الف) $\frac{2}{-p} + \frac{3}{p} - \frac{4}{p} +$ ب) $\frac{2}{+p} - \frac{3}{-p} - \frac{4}{p} +$ ۲ تقریب بخواب است! (عبارت درجه ۳ است)	۸
الف) $\frac{(1)(2)}{n-3} (n-1)(n-2)$ ب) $\frac{(1)(2)}{(n-1)(n-3)} (n-1)(n-2)$ ۱,۲۵	۹
الف) $\frac{(1)(-1)}{n^2+n+2} (n^2-1)(n+1)$ ب) $\frac{n^2+3n+4}{n^2+2n+3} > 0$ ۲ نماد به تعیین علامت نیست همداره مثبت است	۱۰



الف - 9 $y = \frac{x^3 - 3x + 2}{x - 3} = \frac{(x-1)(x^2 + x - 2)}{x - 3} = \frac{(x-1)(x+2)(x-1)}{x - 3}$

مجموعه ضرایب صفحات 1 بر 1 منفی پذیرات!

Sign chart:

Interval	Sign
$x < -2$	+
$-2 < x < 1$	-
$1 < x < 3$	-
$x > 3$	+