

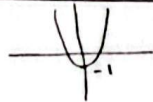
نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره کلاس (هفتم) (جبهه) نام و نام خانوادگی

$y^3 = 2x^2 - 1$ $y_1^3 = 2x_1^2 - 1$ if $x_1 = x_2 \Rightarrow y_1^3 = y_2^3$ $y_1 = y_2$ ✓
 $y_2^3 = 2x_2^2 - 1$

$y = \frac{-y_p \pm \sqrt{\Delta}}{2}$ $\Delta = y_p^2 - 4(y_p^2 + 1) = y_p^2 - 4y_p^2 - 4 = -3y_p^2 - 4$
 $y_1 = \frac{-y_p \pm \sqrt{-3y_p^2 - 4}}{2}$ $y_1 = \frac{-y_p \pm \sqrt{-3y_p^2 - 4}}{2}$

$y^3 + y = 3x^2 - 1$ $y_1^3 + y_1 = 3x_1^2 - 1$ if $x_1 = x_2 \Rightarrow y_1^3 + y_1 = y_2^3 + y_2 \Rightarrow y_1^3 - y_2^3 + y_1 - y_2 = 0$
 $y_2^3 + y_2 = 3x_2^2 - 1$ $(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + y_1 + y_2 + 1) = 0 \Rightarrow (y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + y_1 + y_2 + 1) = 0$

$y = x^2 - 1$ به روش شکل



تابع است

$|y| + xy = x^2 + 1 \Rightarrow x = 0 \Rightarrow |y| = 1 \Rightarrow y = \pm 1$

تابع نیست

$y^3 + x^3 = 2x - 1 \Rightarrow y^3 = 2x - 1 - x^3 \Rightarrow y = \sqrt[3]{2x - 1 - x^3}$

تابع است

$\sqrt[3]{y} + \sqrt[3]{x} = 2 \Rightarrow \sqrt[3]{y} = 2 - \sqrt[3]{x} \Rightarrow y = (2 - \sqrt[3]{x})^3$

تابع است

الف) $\tan \frac{\pi}{4}$ $\frac{\pi}{4} = 45^\circ$ $\tan 45^\circ = \sqrt{3}$

ب) $\cot \frac{5\pi}{4}$ $\frac{5\pi}{4} = 225^\circ$

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

$\cot = \frac{\cos}{\sin} = \sqrt{3}$

2.) $\tan 330^\circ$

3.) $\cot 180^\circ$

$\tan = \frac{\sin}{\cos} \Rightarrow \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$

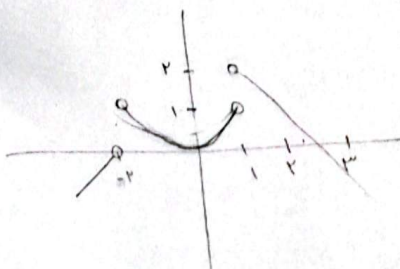
$\cot = \frac{\cos}{\sin} = \frac{-1}{0} \Rightarrow$ تعریف نشده

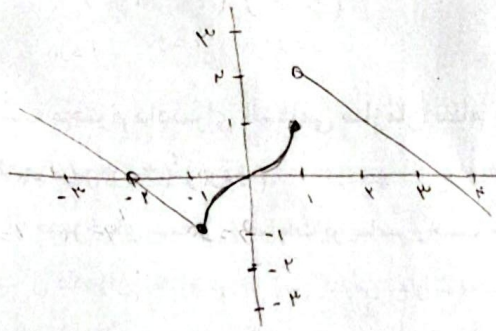
الف) $\sin \alpha = \frac{1}{\sqrt{2}}$

$\alpha = \frac{\pi}{4}, \frac{3\pi}{4}$

ب) $\cos \alpha = \frac{\sqrt{2}}{2}$

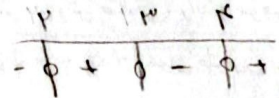
$\alpha = \frac{\pi}{4}, \frac{7\pi}{4}$





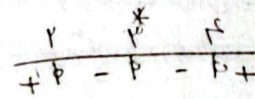
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ج) $y = (x-2)(x-3)(x-5)$
 $x=2 \quad x=3 \quad x=5$

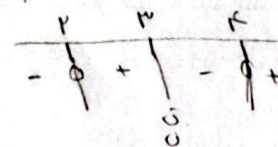


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ب) $y = (x-2)(x-3)^2(x-5)$
 $x=2 \quad x=3 \quad x=5$

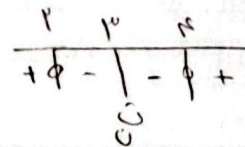


ج) $\frac{(x-2)(x-5)}{(x-3)}$ $x=2 \quad x=5$
 $x=3$

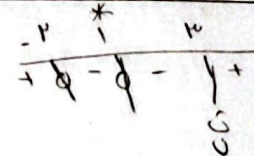


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ب) $\frac{(x-2)(x-5)}{(x-3)^2}$ $x=2 \quad x=5$
 $x=3$

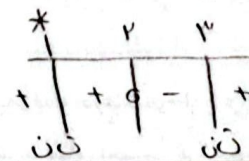


ج) $y = \frac{x^2 - 4x + 4}{x^2 - 3} = \frac{(x-2)^2}{(x-3)}$ $x=1 \quad x=-2$
 $x=3$

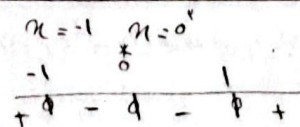


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ب) $y = \frac{(x-1)(x-2)}{(x-1)(x-3)} \Rightarrow x=1 \quad x=2$
 $x=1 \quad x=3$



ج) $\frac{x^2(x^2-1)}{x^2+x+2} = \frac{x^2(x-1)(x+1)}{x^2+x+2}$ $x=1 \quad x=-1 \quad x=0$
 $\Delta < 0$ (المميز)
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ب) $\frac{x^2 + 3x + 2}{x^2 + 2x + 3}$