

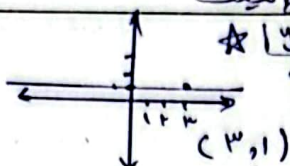
جواب فرم در اقل فرم است $y = \sqrt[3]{2m^2 + m}$ $\Rightarrow y^3 = 2m^2 + m \Rightarrow y^3 - m = 2m^2$ الف
میکارایم و نگاه می‌کنیم این یک معادله در y نیست می‌توانیم بین تابع است $\sqrt{\quad}$

☆ $n = 0 \rightarrow m = 3 \rightarrow m^2 + 1 = 10 \rightarrow m = 3$ (بزرگترین)

ج) $\sqrt{x-4} + |y-2| = 0$ $\Rightarrow \sqrt{x-4} = 0$ و $|y-2| = 0$ $\Rightarrow x=4$ و $y=2$ (نقطه)

$\cos y = 1$ $y = 0^\circ, 360^\circ, 720^\circ, 1080^\circ, \dots$
 $m = \cos y$ $m = 1$ $\Rightarrow$ $y = 0^\circ$ $\Rightarrow$ $x = 1$

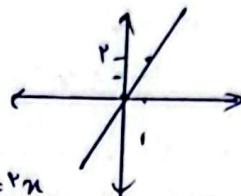
تاریخ ۱۳۰۱ | الف



★ $y=1$ 1:1 ratio

$$f(n) = 1$$

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$$m = 1$$
$$y = r$$

$$y - y_1 = a(x - x_1) \rightarrow y - 4 = 2(x - 1)$$

$$y = \sqrt{x} \rightarrow f(x) = \sqrt{x}$$

در تمام معادلات متغیر y باید اندک بیش از صفر باشد و متغیر x باید $y = ax + b$ باشد (الف)
 اگر $y = x$ باشد $a = 1$ و $b = 0$ $\Rightarrow a + 2b = 1 + 2 \times 0 = 1$ $\star$ ← اینجاست

$$\begin{matrix} a=1 \\ b=0 \end{matrix} \Rightarrow a+rb = 1 + \cancel{r \cdot 0} = \textcircled{1} \star$$

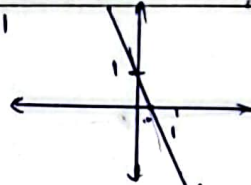
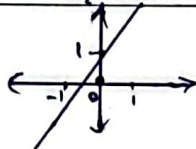
$$\text{ب) } \frac{r}{r^2} = \frac{-b}{ra} \rightarrow \frac{-a}{ra} = r \rightarrow \frac{-a}{r} = r \rightarrow -a = r^2 \rightarrow a = -r^2$$

$$y = x^2 + ax + b \rightarrow a + 4b = -2 + 4 \times 1 = 2$$

$$1 + 1x - 2 + b = r \quad \rightarrow \quad -1 + b = r \Rightarrow b = \omega$$

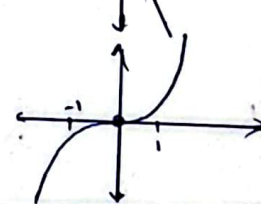
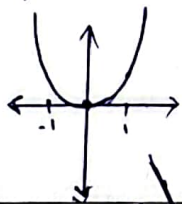
الف) $y = 4x + 1$

$$y = -4x + 1$$

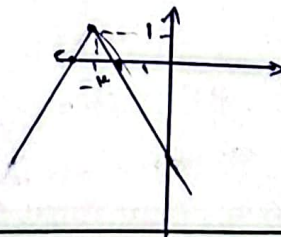


$$2) y = n^2$$

2) $y = n^{\omega}$



الف) $y = 10x + 2 \rightarrow$



$$\hookrightarrow y = -1 \cdot |x+3| + 1$$

$$y = |x|$$

$$f(x) = \ln x$$

الف) $y = \frac{n+2}{n^2-2n}$ $\rightarrow n^2-2n \neq 0 \Rightarrow n(n-2) \neq 0 \Rightarrow n \neq 0 \quad n-2 \neq 0 \Rightarrow n \neq 2$ $\star Df = \mathbb{R} - \{0, 2\}$ ب) $y = \frac{n+2}{n^2-2n+4}$ $\rightarrow \Delta = b^2-4ac = (-2)^2 - 4 \times 1 \times 4 = 4 - 16 = -12 < 0$ $\star Df = \mathbb{R}$ ج) $\frac{n+2}{n^2-2n+4} \Rightarrow \Delta = b^2-4ac \rightarrow 11^2 - 4 \times 1 \times 4 = 121 - 16 = 105 > 0$ $\star Df = \mathbb{R}$ د) $\frac{n+2}{n^2-2n} \rightarrow n^2-2n \neq 0 \Rightarrow n(n-2) \neq 0 \Rightarrow n \neq 0, n \neq 2$ $\star Df = \mathbb{R} - \{0, 2\}$	6
الف) $\sqrt{4-n} + \sqrt{n-2} \rightarrow 4-n \geq 0 \rightarrow n \leq 4$ $n \geq 2$ $\star Df = [2, 4]$ ب) $\frac{n+1}{n^2+1} \rightarrow n^2+1 > 0$ $\star Df = \mathbb{R}$ ج) $\frac{\sqrt{n-2}}{n-2} \rightarrow n-2 \neq 0 \rightarrow n \neq 2$ $n \geq 0$ $Df = [0, +\infty) - \{2\} = [0, 2) \cup (2, +\infty)$ د) $y = \frac{n+3}{\ln n}$ $\rightarrow \ln n \neq 0 \rightarrow n \neq 1$ $Df = \mathbb{R} - \{1\}$	7
$\cos 120^\circ = -\frac{\sqrt{3}}{2}$ $\cos 150^\circ = -\frac{\sqrt{3}}{2}$ $\cos 180^\circ = -1$ $\cos 210^\circ = -\frac{\sqrt{3}}{2}$ $\cos 240^\circ = -\frac{1}{2}$ $\cos 270^\circ = 0$ $\cos 300^\circ = \frac{1}{2}$ $\cos 330^\circ = \frac{\sqrt{3}}{2}$ $\cos 0^\circ = 1$ $\cos 90^\circ = 0$ $\cos 180^\circ = -1$ $\cos 270^\circ = 0$ $\cos 360^\circ = 1$	8
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الف) $\cos(\frac{\sqrt{3}\pi}{4}) = \frac{1}{2}$ $\sin m = \frac{1}{2} \Rightarrow \sin 30^\circ = \frac{1}{2} \rightarrow \sin(\frac{\pi}{6}) = \frac{1}{2}$ $\sin 150^\circ = \frac{1}{2} \rightarrow \sin(\frac{5\pi}{6}) = \frac{1}{2}$ ب) $\cos(\frac{4\pi}{4}) = \frac{\sqrt{3}}{2}$ $\sin m = \frac{\sqrt{3}}{2} \Rightarrow \sin 60^\circ = \frac{\sqrt{3}}{2} \rightarrow \sin(\frac{\pi}{3}) = \frac{\sqrt{3}}{2}$ $\sin 120^\circ = \frac{\sqrt{3}}{2} \rightarrow \sin(\frac{2\pi}{3}) = \frac{\sqrt{3}}{2}$	10