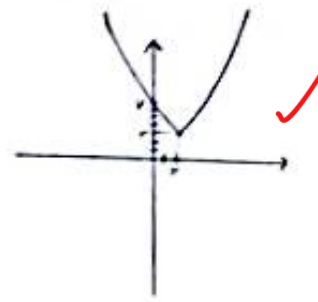
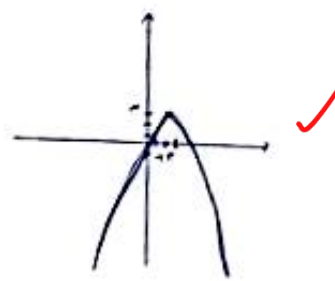


① ۲



عوض ابتدا
الف) $y = x^2 - 4x + 7$
 $\frac{dx}{dt} = \frac{2}{3}$

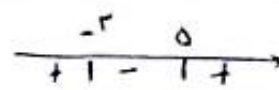


عوض ابتدا
ب) $y = -x^2 + 4x - 1$
 $\frac{dx}{dt} = \frac{2}{3}$

$\Delta = b^2 - 4ac$

② ۲

$(u+1)^2 - 4u - 1 > 0 \rightarrow u^2 + 2u + 1 - 4u - 1 > 0 \rightarrow u^2 - 2u > 0$



$(u-0)(u-2) > 0$

الف) در نتیجه متغایز $\Delta > 0$

$u \in \mathbb{R} - [-2, 5]$

" " "

$u^2 - 2u - 1 = 0$

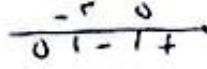
$(u-0)(u+2) = 0$

$u = \{-2, 5\}$

ب) $\Delta = 0$ یک جواب

" " "

$(u-0)(u+2) < 0$



ج) فاصله مثبت معقبتی $\Delta < 0$
 $u \in (-2, 5)$

" " "

$(u-0)(u+2) \geq 0$

$u \in \mathbb{R} - (-2, 5)$

د) مازله بسته داشته باشد $\Delta = 0$

$$Y = (m-2)x^2 - 2(m+1)x + 10$$

$$S < 0 \rightarrow \frac{2m+2}{m-2} < 0 \quad \frac{-1 \quad 2}{+ \quad - \quad - \quad +}$$

$$-1 < m < 2 \quad I$$

$$P > 0 \rightarrow \frac{10}{m-2} > 0 \quad \frac{2}{- \quad + \quad +}$$

$$m > 2 \quad II$$

$$\Delta > 0 \rightarrow 4m^2 + 4m + 8 - 4(m+1) > 0 \xrightarrow{\div 4} m^2 - 1 > 0 \quad \mathbb{R} \setminus \{-1, 1\} \quad III$$

$$\Rightarrow I \cap II \cap III = \emptyset \quad \checkmark$$

$$S < 0 \rightarrow \frac{2m+2}{m-2} < 0 \quad \frac{-1 \quad 2}{+ \quad - \quad - \quad +} \quad -1 < m < 2 \quad I$$

$$P < 0 \rightarrow \frac{10}{m-2} < 0 \quad \frac{-2 \quad +}{+ \quad - \quad +} \quad m < 2 \quad II$$

$$m < 2 \quad II$$

$$\Delta > 0 \rightarrow m^2 - 1 > 0 \quad \mathbb{R} \setminus \{-1, 1\} \quad III$$

$$\Rightarrow I \cap II \cap III = \{m \in (-1, 2)\} \quad \checkmark$$

$$Y = (m-2)x^2 - 2(m+1)x + 10$$

$$P < 0 \rightarrow \frac{10}{m-2} < 0 \quad \frac{-2 \quad +}{+ \quad - \quad +} \quad m < 2 \quad II$$

$$\Delta > 0 \rightarrow m^2 - 1 > 0 \quad \mathbb{R} \setminus \{-1, 1\} \quad III$$

$$\Rightarrow m < 2 \quad \checkmark$$

$$\left. \begin{matrix} P < 0 \\ \Delta > 0 \end{matrix} \right\} \text{نیست}$$

$$\frac{-b}{2a} = -2 \rightarrow \frac{-2m-2}{2m-2} = -2 \rightarrow -2m-2 = 4m-4 \rightarrow 4m = 2 \rightarrow m = \frac{1}{2} \quad \checkmark$$

$$\frac{-b}{2a} = -2 \quad \text{ب) عدد مقابل}$$

B ≈ 1/2

معین نصیری

تاریخ: 12/1/2020

$$\frac{rK^r}{r} - (r \sin \alpha) u + \frac{r}{r} = 0$$

$$p > 0 \rightarrow \frac{r}{r} > 0 \checkmark$$

$$r > 0 \rightarrow \frac{r \sin \alpha}{\frac{r}{r}} > 0 \checkmark$$

$$\frac{(u-1)(r u+1)}{Y} \quad \frac{(u-1)(r u-0)}{Y}$$

$$Y = \frac{(r u^2 - r u - 1)(r u^2 - r u - 0)}{1 - u^r} \rightarrow -(r u+1)(r u-0) = -(4u^2 - 10u + r u - 0)$$

$$\rightarrow -4u^2 + 10u + 0 \cdot y$$

$$\max u \rightarrow \frac{-0}{2a} = \frac{10 + 10}{2 \cdot 4} = \frac{20}{8} \checkmark$$

$$m u^r - (m+r) u - r = 0$$

$$\rightarrow r s - v = \Delta p \rightarrow \frac{r m + 4}{m} - v = \frac{10}{m} \rightarrow r m + 4 - v m = -10$$

$$\rightarrow -e m = -10 \rightarrow m = 10$$

$$\rightarrow e u^r - 4u - r = 0 \rightarrow \alpha^r + \beta^r = s^r - r p = \frac{34}{14} + 1 = \left(\frac{\Delta r}{14} \rightarrow \frac{r}{14} = \frac{13}{14} \right) \checkmark$$

$$\frac{e \alpha + \beta^0}{\Delta \beta^r}$$

$$\Rightarrow \frac{\alpha^r \beta^r + \beta^0}{\Delta \beta^r}$$

$$\frac{c}{a} = r \rightarrow \alpha \beta = r \rightarrow e = \alpha^r \beta^r$$

$$\rightarrow \frac{\beta^r (\alpha^r + \beta^r)}{\Delta \beta^r} = \frac{\alpha^r + \beta^r}{\Delta} = \frac{s^r - r s p}{\Delta} = \frac{14 - 30}{\Delta} = \frac{9}{\Delta} = 19 \checkmark$$

باز هم

نمی

کتاب

$$y_1 = au^r + bu + c$$

$$y_2 = ru + 10$$

$$\frac{c = \epsilon}{\text{در } 10 - r \cdot 10, \text{ و } 10}$$

$$\begin{cases} \epsilon a + 12b = 10 \\ 1a - 12b = 0 \end{cases}$$

(2) (9)

$$\begin{cases} a = 1 \\ b = 12 \end{cases} \checkmark$$

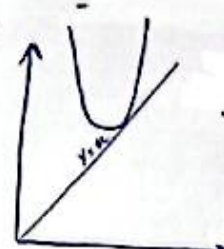
$$y = u^r + 12u + \epsilon$$

$$\frac{\text{در } 10}{r \cdot 10} = \frac{-b}{r \cdot a} = \left(-\frac{12}{1} \right) \checkmark$$

(10)

(2)

نشان



$$\text{نشان} \rightarrow \text{نشان} \rightarrow \Delta = 0 \quad \begin{cases} y = ru^r + (u+1)u + m + y \\ y = u \end{cases} \Rightarrow y = y \Rightarrow ru^r + (u+1)u + m + y = u$$

$$\Rightarrow ru^r + mu + (u+1) = 0$$

$$\Rightarrow \Delta = 0 \rightarrow m^2 - 12m - \epsilon = 0$$

$$(m-12)(m+\epsilon) = 0$$

$$m = \begin{cases} -\epsilon \checkmark \\ 12 \text{ و } \epsilon \end{cases}$$

$$= m = -\epsilon \checkmark$$

$$\begin{aligned} \text{مثال} \quad \begin{cases} x > 0 \\ y > 0 \end{cases} &\rightarrow \frac{-b}{r \cdot a} > 0 \quad \begin{cases} -\epsilon \checkmark \\ 12 \checkmark \end{cases} \\ &\rightarrow \frac{-(b^2 - 4ac)}{r} > 0 \quad \begin{cases} -\epsilon \checkmark \\ 12 \checkmark \end{cases} \end{aligned}$$