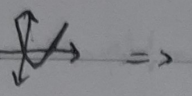
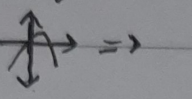
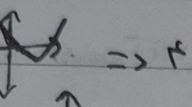
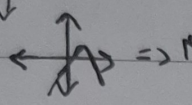
پاسخ تمامی

Subject: Year: Month: Day:

۱) الف) min دارد $\Rightarrow$  $\Rightarrow$ سوم

ب) max دارد $\Rightarrow$  $\Rightarrow$ دوم

۲) الف) min  $\Rightarrow$ ۴، ۲ و ۱

ب) max  $\Rightarrow$ ۴، ۳ و ۱

۳) الف) $\frac{S}{\frac{\sqrt{\Delta}}{|a|}} = \frac{1}{\sqrt{13}} = \frac{\sqrt{13}}{13}$ $\quad S=1 \quad P=-3$

ب) $\alpha^2+\beta^2 = S^2 - 2P = 1+6 = 7$ $\quad$ ج) $\alpha^3+\beta^3 = S^3 - 3SP = 1+9 = 10$

د) $\alpha^3-\beta^3 = (\alpha-\beta)(\alpha^2+\beta^2+\alpha\beta) = \sqrt{13}(7+(-3)) = 4\sqrt{13}$

۴) $x^2-ax+a \rightarrow \Delta<0 \rightarrow a^2-4a<0 \Rightarrow a(a-4)<0$ $\quad \frac{+ \;\; 0 \;\; - \;\; 4 \;\; +}{}$ $\Rightarrow (0,4)$ (I)

x^2-ax+a [redacted] $\rightarrow (x-2)^2 = x^2-4x+4 \rightarrow a=4$ (II) $\quad$ I, II $\Rightarrow (0,4]$

۵) $\alpha+\beta=4 \rightarrow \beta = 4-\alpha \Rightarrow 2\alpha^2+\beta^2-4\alpha+7 \Rightarrow 2\alpha^2+(4-\alpha)^2-4\alpha=7 \rightarrow \underbrace{2\alpha^2-12\alpha+9=0}_{a=-9}$

$\alpha^2-4\alpha+3=0 \rightarrow \alpha = 1, 3 \quad \beta = 1 \quad \frac{-9}{3} = -3$

۶) $\frac{7-2a+2a+3}{2} = 5 \rightarrow (5,2)$ $\quad 7-2a>0 \rightarrow a<3/5$ $\quad 2a+3>0 \rightarrow$ [redacted] $a>-1/5$

$a-2>0 \rightarrow a>2$ $\quad$ [redacted] $\Rightarrow a=3$ $\quad A=(9,1)$ [redacted] $\Rightarrow y = p(x-5)^2+2$

$1 = p(9-5)^2+2 \Rightarrow 16p+2=1 \rightarrow p = -\frac{1}{8}$ $\quad y_0 = p(0-5)^2+2 = -\frac{1}{8}$ $\quad$ ناصلا تا مبدا $\Rightarrow |y_0| = |1-\frac{1}{8}| = \frac{1}{8}$

۷) $|\alpha-\beta| = \frac{\sqrt{\Delta}}{|a|}$ $\quad ax^2-ax-b \rightarrow x^2-x-\frac{b}{a}=0$ $\quad x^2-x+c=0$ $\quad P'-\beta = -c$ $\quad 2\beta^2+\alpha^2-\beta = \frac{17}{20}$

$S^2-2P-c = 1-2c-c = 1-3c = \frac{17}{20} \rightarrow c = \frac{1}{20}$ $\quad \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{\frac{4}{5}}}{1} = \frac{2}{\sqrt{5}} = \frac{2\sqrt{5}}{5}$

۸) $y = a(x-h)^2+k$ $\quad$ [redacted] $\xrightarrow{h} a(x+2)^2 - \frac{1}{2} \xrightarrow{\frac{1}{2}} 2a - \frac{1}{2} = \frac{3}{2} \rightarrow a = \frac{1}{2}$ $\quad y = \frac{1}{2}(x+2)^2 - \frac{1}{2}$

$\frac{1}{2} \times 9 - \frac{1}{2} = 4$

Pasha

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$S=-4$ $p=a$ $r\alpha^2+r\beta^2=\frac{a}{2}(\alpha^2+\beta^2)+\frac{1}{4}(\alpha^2-\beta^2)$ $\frac{a}{2}(2r-2a)+\frac{1}{4}(a-\beta)(\alpha+\beta)$ 19

$9a-4a+4\sqrt{9-a}=12\sqrt{2}+18 \rightarrow a=1$

$\sqrt{\frac{1}{x_1}}+\sqrt{\frac{1}{x_2}}=a \rightarrow \frac{1}{x_1}+\frac{1}{x_2}+2\sqrt{\frac{1}{x_1x_2}}=\frac{S}{p}+2\sqrt{\frac{1}{p}}$ $\frac{m+18}{1}+2\sqrt{2m}=$ $m+18+12=24$ (1

$m=-1$ $\frac{2}{-1}=-2$