فاطمه موسوی

$\alpha\beta = \frac{c}{a} = 2$ $\quad \left(\frac{4\alpha+\beta^5}{5\beta^2}\right)\times\frac{\beta}{\beta} = \frac{4\alpha\beta+\beta^6}{5\beta^3}$ —1

$\left(\frac{4\times2+\beta^6}{5\beta^3}\right)\times\frac{\alpha^3}{\alpha^3} = \frac{8\alpha^3+\overbrace{\alpha^3\times\beta^3}^{8}\times\beta^3}{5\underbrace{\beta^3\alpha^3}_{8}} = \frac{\alpha^3+\beta^3}{5}$

$\frac{S^3-3SP}{5} = \frac{5^3-3\times2\times5}{5} = 25-6 = \boxed{19}$

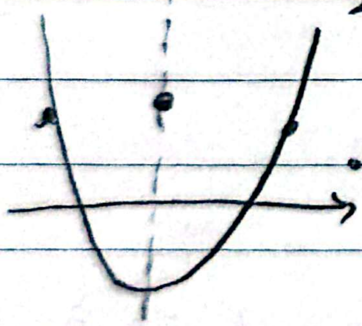
$S=-\frac{b}{a}$ $\quad P=\frac{c}{a}$

$S=$

—2

$\frac{x_1+x_2}{2} = \frac{-1.5+3}{2} = 0.75$

$\frac{\text{مجموع دو نقطه با برد}}{2} = \frac{\text{مجموع دو نقطه با برابر}}{2}$



مجموع نقطه با برد = $\frac{\text{مجموع صفرها}}{\text{تعداد}}$ = 1.5

—3

$|\alpha-\beta| = \frac{\sqrt{\Delta}}{|a|}$ $\quad \sqrt{4k^2-20} = \frac{4}{3}k$

$4k^2-20 = \frac{16}{9}k^2$

$\Delta = b^2-4ac$ $\quad 4k^2-\frac{16}{9}k^2 = 20$ $\quad \frac{20}{9}k^2 = 20$ $\quad k^2=9$

$\frac{k^2}{2} = 4.5$ $\quad \left[\frac{k^2}{2}\right] = 4$

١)

$ax^2+bx+c=y$

$9a+3b+\cancel{c}=25a-5b+\cancel{c}$

$x=3 \qquad x=-5$

$8b=16a$

$b=2a$

$ax^2+2ax+c=y$

$ax^2+2ax+a+1=y$

$x^2+\underbrace{2}_{s}x+\underbrace{1+\frac{1}{a}}_{p}=0$

$s=-2$

$\frac{1}{a}=\frac{-3}{2} \qquad a=\frac{-2}{3}$

$y=c=\frac{-2}{3}+1=\boxed{\frac{1}{3}}$

$x=0$

نقطة عرض المبدأ $\left(0, \frac{1}{3}\right)$

٤ـ ٢)

$y=\frac{-\Delta}{4a}=\frac{-(4a^2-4ac)}{4a}=1$

$\frac{-4a(a-c)}{4a}=1$

$a-c=-1$

$c=a+1$

$\alpha^2+\beta^2=5=s^2-2p$

$4-2\left(1+\frac{1}{a}\right)=5$

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

٥ـ

$x_1=\frac{-b+\sqrt{b^2-4ac}}{2a}$ $\qquad \frac{-5+\sqrt{25+4m}}{-2}<\frac{9}{2}$

$x_2=\frac{-b-\sqrt{b^2-4ac}}{2a}$ $\qquad \frac{\sqrt{25+4m}}{-2}<\frac{4}{2}$ مهند برزار

$\frac{-5-\sqrt{25+4m}}{-2}<\frac{9}{2}$ $\qquad \frac{5+\sqrt{25+4m}}{2}<\frac{9}{2}$

$\frac{\sqrt{٢٥ + ٤m}}{٢} < \frac{٤}{٢}$ ٢٥ + ٤m < ١٦

٤m < $\frac{-٩}{٤}$ → −٢,٢٥

ابيدورية — ١ Δ > ٠ b² − ٤ac > ٠

اشتراط ٢٥ + ٤m > ٠ $\frac{٤m}{٤} > \frac{-٢٥}{٤}$ m > −٦,٢٥

−٦,٢٥ < m < −٢,٢٥ −٦ , −٥ , −٤ , −٣ ٤ تكرار

٦ — m > ٠ min دار

y = ٢x² − ١٢x + $\frac{١٥ - ١}{١٤}$ — −٢٠m² + ٤m

y = $\frac{-(١٤٤ - ٤(m)(٥m - ١))}{٤m}$ = ٢

ext | ٢ ٢

−١٤٤ + ٢٠m² − ٤m − ٨m = ٠

٢٠m² − ١٢m − ١٤٤ ÷ ٢٠ x = $\frac{-b}{٢a}$ $\frac{١٢}{٦}$ = ٢

(m − ٦٠)(m + ٤٨) = ٠

m = $\frac{٦٠}{٢٠}$ = ٣ ✓ y = $\frac{٢ \times ٤}{١٢}$ − $\frac{١٢ \times ٢}{٢٤}$ + ١٤,٢

$\frac{-٤٨}{٢٠}$ مرفوض x = ٢

٧ —

αβ = a²

$\frac{٢a - ١}{١}$ = a² a² − ٢a + ١ = ٠

(a − ١)² = ٠ a = ١

٨ـ $x^{٤} - ٧x^{٢} - ٥ = ٠ \qquad t^{٢} - ٧t - ٥ = ٠$

$x_{١} = \dfrac{٧ + \sqrt{٤٩ + ٢٠}}{٢} \qquad x = \pm\sqrt{\dfrac{٧ + \sqrt{٦٩}}{٢}}$

$x_{٢} = \dfrac{٧ - \sqrt{٤٩ + ٢٠}}{٢} < ٠$ غیرقابل قبول

$S = ٠ \qquad P = -\left(\dfrac{٧ + \sqrt{٦٩}}{٢}\right)$

$٢p^{٢} - ٢sp + ٢s = ٢p^{٢} = ٢ \times \left(\dfrac{٧ + \sqrt{٦٩}}{٢}\right)^{٢}$

$\cancel{٢} \times \dfrac{٤٩ + ٦٩ + ١٤\sqrt{٦٩}}{\cancel{٤}\,٢} = \boxed{٥٩ + ٧\sqrt{٦٩}}$

-٩

$kx^2 - 4x - 6 = y$

$x = \frac{-b}{2a} = \frac{4}{2k}$

$y = \frac{-\Delta}{4a} = \frac{-(16+24k)}{4k} = -\frac{4}{k} - 6 = \frac{-4}{2} - 6 = \boxed{-8}$

$\frac{-4}{k} - 6 = -4 \times \frac{4}{2k} - 4$

$\frac{-4}{k} - 6 = \frac{-8}{k} - 4 \qquad \frac{4}{k} = 2 \qquad \boxed{k = 2}$ ٨ - ب

١٠

$-mx^2 + mx + 1 = -m - x$ معادلة حلول

$-mx^2 + mx + x + 1 + m = 0$ معادلة

$\Delta < 0 \qquad b^2 - 4ac < 0 \qquad (m+1)^2 - 4(-m)(1+m)$

$(m+1)(m + 1 + 4m) < 0$

$(m+1)(5m + 1) < 0$

$-1 \qquad \frac{-1}{5}$

$- \quad + \quad -$

$(-1, \frac{-1}{5}) \rightarrow$ مجموعة الحل

MICRO