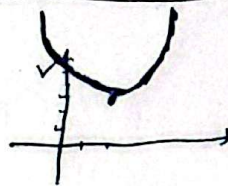
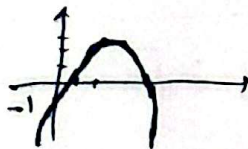


$$y = x^2 - 4x + 7 \quad \frac{-b}{2a} = x_s = 2 \quad y_s = 3$$



$$y = -x^2 + 4x - 1 \quad \frac{-b}{2a} = x_s = 2 \quad y_s = 3$$



$$\Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow m^2 + 2m + 1 - 4 > 0$$

$$m^2 - 2m - 3 > 0 \quad \frac{2 \pm 4}{2} = \begin{cases} 3 \\ -1 \end{cases} \quad \frac{-2 \pm \sqrt{4}}{+1-1+} \quad \underline{(-\infty, -1) \cup (3, +\infty)}$$

$$\Delta = 0 \rightarrow b^2 - 4ac = 0 \rightarrow$$

$$m = 3, -1$$

$$\Delta < 0 \rightarrow b^2 - 4ac < 0 \quad \frac{-2 \pm \sqrt{4}}{+1-1+}$$

$$m = (-1, 3)$$

$$\Delta \geq 0 \rightarrow b^2 - 4ac \geq 0 \quad \frac{-2 \pm \sqrt{4}}{+1-1+} \quad \underline{(-\infty, -1] \cup [3, +\infty)}$$

$$\Delta > 0 \quad (m^2 + 2m + 1 - 4 > 0) \quad \frac{-2 \pm \sqrt{4}}{2}$$

$$(m^2 + 2m + 1 - 4 > 0) \rightarrow (m^2 + 2m - 3 > 0)$$

$$\frac{m+1}{m-2} < 0 \quad \frac{-2 \pm \sqrt{4}}{+1-1+} \quad \frac{1}{m-2} > 0 \quad \frac{2}{-1+} \quad \Delta$$

$$(-2, 1)$$

$$(2, +\infty)$$

$$\rightarrow \underline{\cap = \emptyset}$$

$$\rightarrow \text{مجموعه} \rightarrow (-2, 1)$$

$$\frac{c}{a} < 0 \quad (-\infty, 2)$$

$$\Delta > 0 \rightarrow + \frac{2}{-1+} \Delta$$

$$\underline{\cap \rightarrow (-2, 1)}$$

$$\text{Graphs of } y = x^2 \text{ and } y = x^2 - 1. \quad \frac{c}{a} < 0 \rightarrow \frac{10}{m-1} \rightarrow \frac{1}{1+} (-\infty, 1)$$

-1

$$-1 + \frac{1}{1+} \Delta$$

$$\frac{-b}{a} \rightarrow \text{vertex} \rightarrow \Delta = (-\infty, 1)$$

$$\frac{-b}{1a} = -1 \rightarrow \frac{1m+1}{1m-1} = -1 \rightarrow 1m+1 = -1m+1 \rightarrow 4m = 0 \rightarrow m = 0$$

$$\Delta \geq 0 \quad f(\sin^2 \alpha - x^2) \geq 0 \rightarrow f(\sin^2 \alpha - x^2) \geq 0$$

-4

$$\frac{f(\sin^2 \alpha)}{1-x^2} \geq 0 \quad \sin^2 \alpha \in [0, 1] \quad x \in [-1, 1]$$

$$(1-x^2 - (x-1)) \rightarrow \frac{1}{1-x}$$

$$1-x^2 \rightarrow 1$$

$$1-x^2 - (x-1) \rightarrow \frac{1}{1-x} \rightarrow \frac{1}{1-x} - (x-1) \rightarrow \frac{1 - (x-1)(1-x)}{1-x} \rightarrow \frac{1 - (x^2 - 1)}{1-x} \rightarrow \frac{2-x^2}{1-x}$$

-4

$$f\left(\frac{m+1}{m}\right) = \Delta \frac{-1}{m} + V$$

-V

$$\frac{1m+1}{m} = \frac{-10m+Vm}{m} \rightarrow 1m+1 = -10m+Vm \rightarrow 1m^2+1m = Vm^2-10m \rightarrow 1m^2-9m=0 \rightarrow 1(m^2-9m)$$

$$m(m-9)=0 \rightarrow m=9$$

$$f(x^2 - 4x - 1) = 0$$

$$5^2 - 19 \rightarrow \frac{25}{19} + \frac{14}{19} = \frac{39}{19} = \frac{13}{19}$$

$$b^2 = ab - 2$$

$$a + b = 4$$

$$a = 4 - b$$

$$ab^2 = a(ab - 2) = 2ab - 10$$

$$5ab - 190 = 19(ab - 10)$$

$$\frac{5ab - 190}{ab - 10} = 19$$

-1

$$\frac{\beta^r}{A} + \frac{\xi}{A} \frac{\alpha}{\beta^r}$$

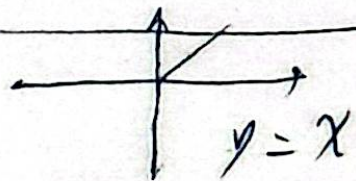
$$\xrightarrow{GK} y=x$$

$$ax^r + bx + c \xrightarrow{r} fa + rb + c = +r^r \rightarrow 11a + 4b = r^0 - 9$$

$$ax^r + bx + c \xrightarrow{-r} 9a - rb + c = c \rightarrow 11a - 4b = 0$$

$$a=1 \quad b=r$$

$$\frac{-b}{ra} = \frac{-r}{r} = -1, A$$



$$m^r + 1m + 1 - 1m - rA, m^r - 4m - rV \quad rV \quad | m = -r |$$

$$m^r - 1m - rA \quad r \pm \sqrt{rA} \rightarrow | m = 1r | \quad \text{---} \text{---} \text{---}$$

- 10