

1) $x^2 - ax + b + kax^2$ $\frac{m}{p} \mid \begin{array}{c} 1 \quad 3 \\ + \quad - \quad + \end{array}$

$x-1 \mid 1-a+b=0 \Rightarrow -\varepsilon + b = -1$
 $9-2a+b=0 \Rightarrow b=2$ $a+b=7$

2) $y = ((k-2)n + m - 1)(n - 2m)^2$ $\frac{q}{p} \mid \begin{array}{c} -1 \quad 3 \\ + \quad - \quad - \end{array}$

$y = (k-2)(n-1)(m+1)$
 $n-2m = 0 \Rightarrow -2m = 1 \Rightarrow m = -\frac{1}{2}$
 $n = 2$
 $k-2 < 0 \Rightarrow k < 2$
 $k < 2$
 $k-1 + m - 1 = 0 \Rightarrow m = 0$

$\frac{m}{n} + k \rightarrow \frac{0}{2} + 2 = 1 = -1 + 1 = -1 \varepsilon$

3) $y = -\frac{1}{r}x^2 + 2x + 6$

$-\frac{1}{r}x^2 + 2x + 6 > \frac{v}{r}$

$(a, b) \Rightarrow (-1, 6)$

$-\frac{1}{r}x^2 + 2x + 6 > -\frac{x-2}{r}x^2 - \varepsilon x - \Delta <$
 $(x-2)(x+1) <$
 $x=2 \quad x=-1$

$b-a > 6 - (-1) = 7$

4) $f(x) = x^2 - 4x^2 - x + 3$

$\frac{x^2 - 4x^2 - x + 3}{x-1} = x^2 - 2x - 3$

$\frac{-1 \quad 1 \quad 3}{- \quad + \quad - \quad +}$

$(x-1)(x-3)(x+1) <$
 $x=1 \quad x=3 \quad x=-1$

دسته غش

$x_2 = 0 \rightarrow 0 < \Rightarrow (1, 3)$

$\frac{1+3}{r} = 2$

$f(2) = 1 - 12 - 2 + 3 = -10$

دسته $\Delta <$

5) $y = (a-1)x^2 + (a-1)x + 1$

$a < 0 \Rightarrow a-1 < 0 \Rightarrow (a > 1)$

$\Delta < 0 \Rightarrow (a-1)^2 - \varepsilon(a-1)(1) < 0 \Rightarrow a^2 - 2a + \Delta <$

$(1, 6) \cap (1, +\infty) = \emptyset$

$\frac{1 \quad 6}{+ \quad - \quad +}$

$(a-6)(a-1) <$
 $a=6 \quad a=1$

دسته مقابله

4) $y = \frac{m(m^2+m)}{m-2} > m > 0$ $m(m^2+1)$
 $\therefore \Rightarrow (2, +\infty) \hookrightarrow m=2$

5) $y = \frac{(m^2 - m - 2)(m-1)^2}{(m^2 + m + 1)(m-1)^2}$
 $\frac{(m-2)(m+1)}{m^2 + m + 1}$
 $m=2$
 $\therefore \Rightarrow [-2, 2) \cup [3, +\infty)$

6) $f(m) = \frac{3m^2 - 2m}{m^2 + 2}$
 $\frac{-2 \quad 3}{+ \quad - \quad +}$
 $(-2, 3) \Rightarrow +3 - (-2) = 5$

7) $y = -1 < \frac{3m^2 - 2m}{m+1} <$
 $\frac{3m^2 - 2m + m + 1}{m+1} > -1$
 $\frac{3m^2 - m + 1}{m+1} > -1$
 $\frac{-1 \quad 1}{- \quad +}$
 $(-\infty, -1) \cup (0, \frac{1}{2})$

8) $y = \frac{m^2 - 1}{m} < 2$
 $\frac{m^2 - 1 - 2m}{m} < 0$
 $\frac{-2 \quad 0}{+ \quad - \quad +}$
 $(-\infty, -1] \cup (0, 2]$