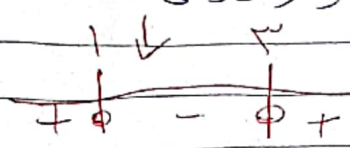


۱۸/۵

۱ < x < 3  
صیغه‌های عباری  
تغییر دیگر تغییراتی است

s = 4 = -(a) => a = 4  
p = 3 = b/1 => b = 3



a + b = 7  
4 + 3 = 7  
x^2 - 7x + 12 = 0  
x = 2 => 4 - 14 + 12 < 0  
x = 1

y = ((k-2)x + m-1)(x-3)^2  
x = -1, n = -1, 2

n = -1/3, x = 4  
k-2 = 1, k = 3  
m-1 = -5 => m = -4  
9 + 3 = 12

y = -1/4 x^2 + 2x + 5 => x^2 + 8x - 20 = 0  
x = 1, -10

(-1, 10) => b-a = 10 - (-1) = 11  
x^2 + 8x + 5 = 0  
x = 10, y = 1/4

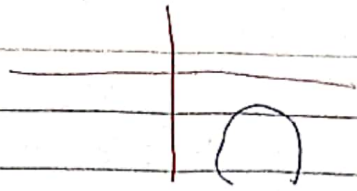
f(x) = x^2 - 4x^2 - x + 3 => -3x^2 - x + 3 = 0

x^2 - 4x - 3 = (x-3)(x+1)  
f(x) = (x-1)(x+1)(x-3)  
P < 0: (a, b) = (1, 3) x > 0  
f(x) = 1 - 12 - 2 + 3 = -10

بناهای صورتی و متغیرهای

ساز

$\Rightarrow$

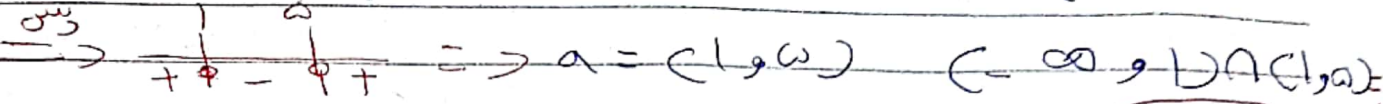


$\Rightarrow \left. \begin{matrix} \textcircled{1} a < 0 \\ \textcircled{2} a < 0 \end{matrix} \right\} \Rightarrow$

$\textcircled{2}$

$\textcircled{1} a - 1 < 0 \Rightarrow a < 1$

$\textcircled{2} (a-1)^2 - 4(a-1) < 0 \Rightarrow a^2 - 5a + 5 < 0$



$\checkmark$   $\textcircled{2} \in \phi$

$\frac{m(m^2 + m)}{m-2} > 0 \Rightarrow \frac{m^2(m^2 + 1)}{m-2} > 0$

$m = (2, +\infty)$   $\checkmark$

$\frac{(x^2 - x - 2)(x + 2)^2}{(x^2 + x + 1)(x - 2)} < 0 \Rightarrow \frac{(x-2)(x+2)(x-1)^2}{(x^2 + x + 1)(x-2)} < 0$

$x = [-2, 2) \cup (2, +\infty)$   $\checkmark$

$\frac{x^2 - 2x}{x^2 + 2} < 2 \Rightarrow \frac{x^2 - 2x - 2x - 2}{x^2 + 2} < 0$

$\Rightarrow \frac{x^2 - 4x - 2}{x^2 + 2} < 0 \Rightarrow (x-2)(x+2) < 0$   
 $(a, b) = (-2, 2)$   $\checkmark$   $b - a = 2 - (-2) = 4$   $\checkmark$

$1 < \frac{x^2 - 2x}{x+1} < 9 \Rightarrow \frac{x^2 - 2x - x - 1}{x+1} < 0$   
 $x = (0, 1) \cup (0, \frac{5}{2})$

$\textcircled{1}, 2 = 1 \cap 2 \Rightarrow (-\infty, -1) \cup (0, \frac{5}{2}) \cap (-1, +\infty)$   
 $x = (0, \frac{5}{2})$   $\checkmark$

$\frac{x^2 - 10}{x} \leq 2 \Rightarrow \frac{x^2 - 10 - 2x}{x} \leq 0 \Rightarrow \frac{(x-5)(x+2)}{x} \leq 0$

$x \in (-\infty, -2] \cup (0, 5]$   $\checkmark$

۲-  $n = 4$  درجه عبارت  $(K-2)n + m - 1$  است :

$$(K-2)4 + m - 1 = 4K + m - 9$$

ضریب  $n$  در عبارت  $(K-2)n + m - 1$  باید منفی باشد چون به ازای  $n < 4$  عبارت مثبت است

$$K - 2 < 0 \rightarrow K < 2 \xrightarrow{\text{K طبیعی است}} K = 1$$

$$4K + m - 9 = 0 \xrightarrow{K=1} m = 5$$

$$\frac{m}{n} + K = \boxed{-14}$$