

Đề bài 4<sup>o</sup>

$$f(x) = \frac{1}{ax^2+1}$$

$\xrightarrow{x=1}$

$$f(1) = \frac{1}{a+1} \Rightarrow$$

$$y = -\frac{1}{2}x + \beta.$$

$$f(1) = \frac{1}{2}$$

Δ). a).

$$f'(x) = -\frac{1}{(ax^2+1)^2} \cdot 2ax \xrightarrow{x=1}$$

$$f'(1) = -\frac{1}{(a+1)^2} \cdot 2a = -\frac{1}{2} \Rightarrow$$

$$2a-2 = a^2+2a+1 \Rightarrow a^2-2a+1=0 \Rightarrow$$

$$(a-1)^2=0 \Rightarrow \boxed{a=1}$$

$$y = -\frac{1}{2}x + \beta \Rightarrow \frac{1}{2} = -\frac{1}{2} + \beta \Rightarrow$$

$$\boxed{\beta=1}$$

B).  $f(x) = \frac{1}{x^2+1}$

$$f'(x) = -\frac{1}{(x^2+1)^2} \cdot 2x$$

$$f'(x) = 0 \Rightarrow \boxed{x=0}$$

$x$	$0$		
$f'(x)$	$+$	$0$	$-$
$f(x)$	$\nearrow$		$\searrow$

$$f(0) = 1 \Rightarrow f(x) =$$

$$f(x) \leq 1$$

$\Delta_2$  a)

$$0 \leq y \leq 1 \Rightarrow 0 \leq -\frac{1}{2}x + 1 \leq 1 \Rightarrow$$

$$-1 \leq -\frac{1}{2}x \leq 0 \Rightarrow -2 \leq -x \leq 0 \Rightarrow$$

$$2 \geq x \geq 0$$

$$b) \quad y_1 = -\frac{1}{2} \cdot \frac{2}{5} + 1 = \boxed{y_1 = \frac{5-1}{5} = \frac{4}{5}}$$

$$y_2 = -\frac{1}{2} \cdot \frac{4}{5} + \frac{5}{5} = \boxed{y_2 = \frac{3}{5}}$$

$$y_3 = -\frac{1}{2} \cdot \frac{7}{5} + \frac{10}{10} = \frac{3}{10}$$

$P(A) \leq P(A \cup B)$  na,  $P(A \cup B) \leq P(A \cap B)$



$$P(A) = \frac{3}{10}, \quad P(A \cup B) = \frac{3}{5}, \quad P(A \cap B) = \frac{4}{5}$$

$$P(A \cap B) = \frac{3}{5} - \frac{4}{5} = \frac{1}{5}$$

$$P(B) = P(A \cup B) - P(A) + P(A \cap B) =$$

$$P(B) = \frac{6}{10} - \frac{3}{10} + \frac{2}{10} \Rightarrow P(B) = \frac{1}{2}$$

$$P(A - B) = \frac{3}{10} - \frac{2}{10} = \frac{1}{10}$$

$$P(A - B') = P(A) - P(A \cap B') = \frac{3}{10} - \frac{1}{10} = \frac{2}{10}$$

$$\frac{1}{10} < \frac{2}{10} \Rightarrow P(A - B) < P(A - B')$$

$$P(B - C)_{\max} = P(B) = \frac{1}{2}$$

$$P(B - C)_{\min} = P(B) - P(C) = \frac{5-3}{10} = \frac{2}{10} = \frac{1}{5}$$

$$\frac{1}{5} \leq P(B - C) \leq \frac{1}{2}$$