

S. 83 / 1)  $|3x - 6| < 12$

$x > 2$ :  $3x - 6 < 12$   $\delta^+$

$x \leq 2$ :  $-(3x - 6) < 12$   $\delta^-$

$3x - 6 < 12$

$-3x + 6 < 12$

$3x < 18$

$-3x < 6$

$x < 6$

$x > -2$

$x > 2 \wedge x < 6$

$x > -2 \wedge x \leq 2$

$x = 3$ :  $|3 \cdot 3 - 6| < 12$

$x = 0$ :  $|3 \cdot 0 - 6| < 12$

$3 < 12 \checkmark$

$| -6 | = 6 < 12 \checkmark$



$\mathcal{L} = \{x \in \mathbb{R} \mid x > -2 \wedge x < 6\}$

$-2 < x < 6$

$] -2; 6 [$

S. 83 / 2.

$$\frac{2x-5}{4-x} < -3 \quad | \cdot (4-x)$$

$x > 4$	$\delta^-$	$x < 4$	$\delta^+$	
$2x-5 > -3 \cdot (4-x)$		$2x-5 < -3(4-x)$		$F$
$2x-5 > -12 + 3x$		$2x-5 < -12 + 3x$		$R$
$-x > -7$		$-x < -7$		
$x < 7$		$x > 7$		
$x > 4 \wedge x < 7$		$x < 4 \vee x > 7$		$\bar{C}$
$x=5: \frac{10-5}{4-5} = -5 < -3$ ✓		$x=3: \frac{6-5}{4-3} = 1 < -3$ ✗		$P$
$\mathcal{L} = \{x \in \mathbb{R} \mid x > 4 \wedge x < 7\}$				$\mathcal{L}$

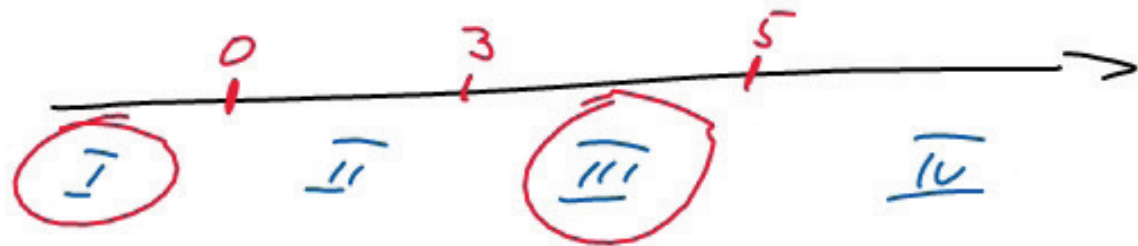
S. 83 13

$$y^3 + 2x^2 + 7y < 10x^2 - 8x$$

Nullf. :

$$x^3 - 8x^2 + 15x < 0$$

$$x(x^2 - 8x + 15) = x(x-5)(x-3) < 0$$



- I.  $x = -1 \Rightarrow (-1) \cdot (-1-5) \cdot (-1-3) < 0 \checkmark$   
II.  $x = 1 \Rightarrow 1 \cdot (1-5) \cdot (1-3) > 0 \not\checkmark$   
III.  $x = 4 \Rightarrow 4 \cdot (4-5) \cdot (4-3) < 0 \checkmark$   
IV.  $x = 6 \Rightarrow 6 \cdot (6-5) \cdot (6-3) > 0 \not\checkmark$

$$\mathcal{L} = \{x \in \mathbb{R} \mid x < 0 \vee (x > 3 \wedge x < 5)\}$$

S90 №. 1

$$\lim_{x \rightarrow 2} \frac{21x - 42}{\sqrt{0,5x} - \sqrt{3-x}} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$$

$$\lim_{x \rightarrow 2} \frac{21x - 42}{\underbrace{\sqrt{0,5x}}_a - \underbrace{\sqrt{3-x}}_b} \cdot \frac{\underbrace{\sqrt{0,5x}}_a + \underbrace{\sqrt{3-x}}_b}{\underbrace{\sqrt{0,5x}}_a + \underbrace{\sqrt{3-x}}_b} \rightarrow a^2 - b^2$$

$$\lim_{x \rightarrow 2} \frac{(21x - 42) \cdot (\sqrt{0,5x} + \sqrt{3-x})}{0,5x - (3-x)} = \begin{bmatrix} 0 \\ 0 \end{bmatrix} \quad (x-2)$$
$$0,5x - 3 + x = 1,5x - 3$$

$$\lim_{x \rightarrow 2} \frac{21 \cdot (\cancel{x-2}) \cdot (\sqrt{0,5x} + \sqrt{3-x})}{1,5(\cancel{x-2})} = \begin{bmatrix} 21 \cdot 2 \\ 1,5 \end{bmatrix}$$

$$\rightarrow \underline{\underline{28}}$$