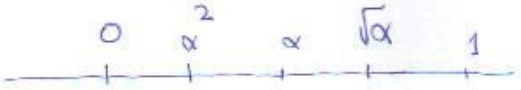
4542

α) $x^2 - x < 0$

x		0		1	
x^2-x	$+$	0	$-$	0	$+$

$0 < x < 1$

β)



(i) $\alpha^2 < \alpha \Leftrightarrow 0 < \alpha < 1$ λόγω (α)

$\alpha^2 < \alpha \Leftrightarrow \sqrt{\alpha^2} < \sqrt{\alpha} \Leftrightarrow \alpha < \sqrt{\alpha}$

(ii) $\sqrt{1+a} < 1 + \sqrt{a} \Leftrightarrow$

$1 + a < 1 + 2\sqrt{a} + a$

$\Leftrightarrow 2\sqrt{a} > 0$ ισχύει