**ΑΠΟΛΥΤΑ**

3Βiii)

$$\left|x-5\right|^{}\leq \left|x+3\right|^{}⇒$$

$$\left|x-5\right|^{2}\leq \left|x+3\right|^{2}⇒$$

(x-5)2$\leq $(x+3)2$⇒$

x2-10x+25$\leq $ x2+6x+9$⇒$

-10x-6x$\leq $9-25$⇒$

-16x$\leq $-16$⇒$

x$\geq 1$

### 4Biii) A=$\left|x-1\right|$+$\left|x-7\right|$=6

|  |  |
| --- | --- |
| x | -$\infty $ 1 7 +$\infty $  |
| x-1$$\left|x-1\right|$$ |  - 0 + $\vdots $ + -x+1 $\vdots $ x-1 $\vdots $ x-1 |
| x-7$$\left|x-7\right|$$ | * $\vdots $ - 0 +

 -x+7 $\vdots $ -x+7 $\vdots $ x-7  |

Αν x<1

A=$\left|x-1\right|$+$\left|x-7\right|$=-x+1-x+7=-2x+8

A=6$⇒$-2x+8=6$⇒$-2x=6-8$⇒$-2x=-2$⇒$x=1 άτοπο

Αν χ=1

Α=0+6=6

Αν 1<χ<7

Α=x-1+(-x+7)=x-1-x+7=6

Aν x=7

A=6+0=6

Aν x>7

A=x-1+x-7=2x-8$⇒2x-8=6⇒$2x=8+6$⇒2x=14⇒x=7$

Άτοπο

Άρα 1 $\leq x\leq 7$