

3. solve for x , $|x-1| \leq 5$, $|x| \geq 2$.

(i) $|x-1| \leq 5$

$$\Rightarrow -5 \leq x-1 \leq 5$$

$$\Rightarrow -4 \leq x \leq 6$$

$$\Rightarrow x \in [-4, 6]$$

(ii) $|x| \geq 2$; $x \leq -2$ or $x \geq 2$.

$$\Rightarrow x \in (-\infty, -2] \cup [2, \infty)$$

union of both gives

$$x \in [-4, -2] \cup [2, 6]$$