

### Problems - 3.3

(2) Decide whether or not the sequence converges to a limit. If it does not, find a convergent subsequence. (You do not need to check the limits with  $\epsilon$  and  $\delta$ .)

$$x_n = 1 + \frac{(-1)^n}{n}$$

(6) Decide whether or not the sequence converges to a limit. If it does not, find a convergent subsequence. (You do not need to check the limits with  $\epsilon$  and  $\delta$ .)

$$x_n = \sin\left(\frac{n\pi}{2}\right) + \cos(n\pi)$$