

HOMEWORK 14

- 1) Fitzpatrick 3.1 number 1.
- 2) Prove all linear polynomials are continuous on \mathbb{R} using sequences.
- 3) Prove the function $g(x) = \begin{cases} -4 & : x < -1 \\ x & : -1 \leq x \leq 1 \\ 3 & : x > 1 \end{cases}$ is discontinuous at both $x_0 = 1$ and $x_0 = -1$ using sequences.
- 4) Fitzpatrick 3.1 number 5.
- 5) Fitzpatrick 3.1 number 7 and 8. (The problems go together well.)
- 6) Fitzpatrick 3.1 number 9. (Note 10 is similar - can you do it also?)
- 6) Fitzpatrick 3.1 number 11.