HOMEWORK 12

1) Prove the sequence $\{\frac{2n}{5n-3}\}$ converges to $\frac{2}{5}$ using the definition of convergence.

2) Prove the sequence $\{3-\frac{1}{n^3}\}$ converges to 3 using the definition of convergence.

3) Prove the sequence $\{\frac{n}{4n-3}\}$ converges to $\{\frac{1}{4}\}$ using the definition of convergence.

4) Prove the sequence $\{\ n^4\}$ diverges to infinity.

5) Prove the sequence $\{\sqrt[3]{3n}\}$ diverges to infinity.

6) Prove the sequence $\{(-1)^n\sqrt{n}\}$ does not have a limit.

7) Prove the sequence $\{(-2)^n\}$ does not have a limit.

8) Chartrand section 12.1 number 12.5

Book Problems $12.1-7$, $12.31-33$, 12.37, 12.39, 12.40