

## HOMEWORK 11

- 1) Prove  $\{\frac{2n}{3n+2}\}$  converges to  $\frac{2}{3}$ .
- 2) Prove  $\{\frac{2n^2+1}{n^2}\}$  converges to 2.
- 3) Prove  $\{3 + (-1)^n\}$  does not have a limit.
- 4) Prove  $\{(-3)^n\}$  does not have a limit.
- 5) Prove  $\{n^3\}$  diverges to infinity.
- 6) Prove  $\{\sqrt{n}\}$  diverges to infinity.