

## Worksheet #7

Determine if the series converges or diverges. State which test you use.

$$(1) \sum_{k=1}^{\infty} \frac{k^2}{1+k^3}$$

$$(2) \sum_{k=1}^{\infty} \frac{k^2}{e^k}$$

$$(3) \sum_{k=1}^{\infty} \frac{\sqrt{2n+1}}{n^3-4}$$

$$(4) \sum_{k=5}^{\infty} \frac{1000}{k(\ln k)^2}$$

$$(5) \sum_{n=1}^{\infty} \frac{n+3}{n^2\sqrt{n}}$$