Worksheet/Quiz - 11/07/13 MAC-2312 **Name:** _____

1. Do the following series converges or not? Briefly justify your answer in each case. If you can find the exact value of a series, you receive 1pt bonus.

(a) $\sum_{k=3}^{\infty}(2/5)^k$

(b) $\sum_{k=10}^{\infty}\frac{k^2-3k+10}{k^2+1}$

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

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

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

(f) $\sum_{n=1}^{\infty}\frac{1}{4n^2-1}$