

Turn in #8

SHOW YOUR WORK AND STAPLE YOUR WORK TO THIS SHEET.

(1) Determine if the series

$$\sum_{n=1}^{\infty} \frac{3n+5}{n2^n}$$

converges or diverges. Indicate which test you used.

(10)

(2) Determine if the series

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

converges or diverges. Indicate which test you used.

(10)

(3) Determine the interval of convergence of the power series

$$\sum_{n=1}^{\infty} \frac{(-1)^n (2x-1)^n}{n5^n}$$

and if $f(x)$ is the function given by the above series, determine the series for $f'(x)$.

(20)
