

## KFUPM

MATH 102

QUIZ #5

Sec. 27

Time: 20min

Name:

ID:

Q1. Examine whether the series converges or diverges:

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

Q2. Does the following series converge? If yes, find its sum:

$$\sum_{n=0}^{\infty} \frac{1-3^{2n}}{5^{2n+1}}.$$

Q3. Determine if the series converges or diverges:

$$\sum_{n=1}^{\infty} \left( \frac{1 - 2 \cos n}{n + 1} \right)^2$$