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Quiz 4 MATH 102-T091

Section: _____

Serial # _____

1. Show that the series $\sum_{n=1}^{\infty} \frac{(-1)^{n-1} n^2}{10^n}$ converges

{**Hint** : Check if we can use AST}

2. Determine whether the series : $\sum_{n=1}^{\infty} \left(1 + \frac{1}{n}\right)^2 e^{-n}$ converges or diverges,

b) How many terms of the series $\sum_{n=1}^{\infty} \frac{(-1)^{n-1}}{(n+1)^3}$ would you need to add to find its sum to within 0.001?

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Quiz 4 MATH 102- T091

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Serial # _____

1. Show that the series $\sum_{n=1}^{\infty} 1/[n(\ln n)^2]$ converges.

{**Hint** : Check if we can use Integral Test}

2. Determine whether the series :

$\sum_{n=1}^{\infty} \frac{2n^2 + 7n}{3^n (n^2 + 5n - 1)}$ converges or diverges.

b) How many terms of the **above series** would you need to add to find its sum to within 0.01?