

Present neatly ~~on separate paper~~. Justify for full credit. No Calculators.

Name _____ Score _____ A (15 minutes) **x3**
For questions 1 through 3, determine whether the series converges or diverges.

1)

$$\sum_{k=1}^{\infty} \frac{1}{2 + \sin k}$$

2)

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

3)

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

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Name _____ Score _____ F (15 minutes) **x3**
For questions 1 through 3, determine whether the series converges or diverges.

1)

$$\sum_{k=1}^{\infty} \frac{1}{2 + \sin k}$$

2)

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

3)

$$\sum_{n=1}^{\infty} \frac{\sin 2n}{1 + 2^n}$$
