

Please show **all** your work! Answers without supporting work will not be given credit.
Write answers in spaces provided.

Name: _____

1. (a) [2 pts] Use summation notation to write the series in compact form.

$$1 - 0.6 + 0.36 - 0.216 + \dots$$

- (b) [2 pts] Use the sum from (a) and find its sum.

Answer: _____

2. [2 pts] If the given series converges, then find its sum. If not, state that it diverges.

$$\sum_{n=0}^{\infty} \left(\frac{3}{2}\right)^n$$

Answer: _____

3. [4 pts] Compute

$$\sum_{n=1}^{\infty} \frac{5^{n+2}}{6^n}$$

Answer: _____