1. [ ] Please circle True or False, as appropriate.
   (a) T / F: The Harmonic Series converges.
   (b) T / F: If \( a_n \to 0 \) as \( n \to \infty \), the series \( \sum a_n \) converges.

2. [ ] For \( c \neq 0 \), the p-series \( \sum_{n=1}^{\infty} \frac{c}{n^p} \) converges for \( p > 1 \) and diverges for \( p \leq 1 \).

3. [ ] For \( c \neq 0 \), the Geometric Series \( \sum_{n=0}^{\infty} cr^n \) converges to \( \frac{c}{1-r} \) for \( |r| < 1 \) and diverges for \( |r| \geq 1 \).

4. [ ] Find the interval of convergence \( I \) for the following power series. For \( x \in I \), find the sum.
   \[
   \sum_{n=0}^{\infty} 3(2x)^n = \frac{3}{1 - 2x}
   \]
   \[
   -1 \leq 2x \leq 1
   \]
   \[
   |x| < \frac{1}{2}
   \]
   \[
   x \in \left( -\frac{1}{2}, \frac{1}{2} \right)
   \]

5. [ ] What specific topic, or topics, are you struggling with the most?
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   (a) T / F: The Harmonic Series converges.
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2. For \( c \neq 0 \), the p-series \( \sum_{n=1}^{\infty} \frac{c}{n^p} \) converges for \( \underline{\text{_________}} \) and diverges for \( \underline{\text{_________}} \).

3. For \( c \neq 0 \), the Geometric Series \( \sum_{n=0}^{\infty} cr^n \) converges to \( \underline{\text{_________}} \) for \( \underline{\text{_________}} \) and diverges for \( \underline{\text{_________}} \).

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