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Date: 03/07/22

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Course: Math 101 A04 Spring 2022

Assignment: HW-6 [Sections 10.4, 10.5 & 10.6]

26. Use an appropriate test to determine whether the series given below converges or diverges.

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

Select the correct choice below and, if necessary, fill in the answer box(es) to complete your choice.

- ☐ A. The Comparison Test with $\sum \sin k$ shows that the series diverges.
- ☐ B. The series converges because it is a geometric series with $r =$.
- ☐ C. The series converges because it is a p-series with $p =$.
- ☐ D. The series converges per the Integral Test because $\int_1^{\infty} \sin \frac{1}{x} dx =$.
- ☒ E. The Limit Comparison Test with $\sum \frac{1}{k}$ shows that the series diverges.
- ☐ F. The series diverges because the limit found in the nth-Term Test is .