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3. Fourier series

Find the Fourier Series

1/1 point (graded)

What is the Fourier series for $\sin^2 \pi t$?

(Enter the first two nonzero terms.)

[FORMULA INPUT HELP](#)

$1/2 - \cos(2\pi t)/2$



$$\frac{1}{2} - \frac{\cos(2\pi t)}{2}$$

Submit

Find the complex coefficients

5/5 points (graded)

Find the coefficients of the complex Fourier series for $\sin^2 \pi t$. (Try doing this in two ways. First by converting the series found above into a complex series directly, and second by direct computation from the definition.)

$c_{-2} =$



$c_{-1} =$ ✓

$c_0 =$ ✓

$c_1 =$ ✓

$c_2 =$ ✓

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✓ Correct (5/5 points)

3. Fourier series

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Indexing of complex coefficients?

discussion posted 29 days ago by [LewAcampora](#)

Doesn't the indexing of the complex coefficients depend on the selection of the period of the $\sin^2(\pi t)$ function? I initially selected the base period of 1 for the function, which resulted in the same Fourier Series, but different coefficient indexing.

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1 response



jfrench (Staff)

29 days ago



You are correct! The base period assumed will definitely change the index!

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