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$$\sum_{n \geq 1} \zeta(2n) x^{2n} = -\frac{\pi x}{2} \cot(\pi x) \qquad \zeta(2) = \frac{\pi^2}{6}$$

$$= -\frac{x}{2} \times \sum_{j \geq 1} \frac{1}{x^2 - j^2}$$

$$\frac{\sin x}{x} = \left(1 - \frac{x^2}{\pi^2}\right)\left(1 - \frac{x^2}{4\pi^2}\right)\left(1 - \frac{x^2}{9\pi^2}\right)\cdots$$

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