

Some Possibly Tricky Series

$$1) \sum_{n=1}^{\infty} \frac{1}{n}$$

$$2) \sum_{n=1}^{\infty} \frac{1}{n^3}$$

$$3) \sum_{n=1}^{\infty} \frac{1}{\sqrt{n}}$$

$$4) \sum_{n=1}^{\infty} \frac{1}{3^n}$$

$$5) \sum_{n=1}^{\infty} \frac{\cos(n)}{n}$$

$$6) \sum_{n=1}^{\infty} \frac{\cos(n)}{e^n}$$

$$7) \sum_{n=1}^{\infty} \frac{e^n}{n!}$$

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$$8) \sum_{n=1}^{\infty} \left(\frac{e^n}{e} \right)^2$$

$$10) \sum_{n=1}^{\infty} \frac{e^n}{\pi}$$

$$11) \sum_{n=1}^{\infty} \left(\frac{e}{\sqrt{e}} \right)^n$$