

Due **Tuesday** Feb 27, at the start of the recitation.

Explain your work and use proper mathematical form. A correct answer poorly explained will not get full marks.

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1. (a) Find  $r$  so that the geometric series  $1 + r + r^2 + \cdots$  converges and has sum 5.  
(b) Find  $b$  so that  $1 + e^b + e^{2b} + e^{3b} + \cdots$  converges and has sum 9.