

# Discussion 6

CUNY MSDS DATA 605

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## Libraries

In this section, I will include all libraries needed.

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**Book:** Grinstead: Introduction to Probability

## Exercise

A more refined inequality for approximating  $n!$  is given by

$$\sqrt{2\pi n} \left(\frac{n}{e}\right)^n e^{1/(12n+1)} < n! < \sqrt{2\pi n} \left(\frac{n}{e}\right)^n e^{1/(12n)}$$

Write a computer program to illustrate this inequality for  $n = 1$  to  $9$ .

## Solution