Part A (13 points): Record answers on the bubble sheet in your answer booklet

1. [1 pt.] True or False: The Maclaurin series for $e^{x/3}$ has radius of convergence $R = 3$.

(A) True (B) False (C) Not enough information to determine

$R = \infty$

2. [1 pt.] True or False: The series $\sum_{n=0}^{\infty}(-1)^n(n+1)x^n$ converges to $\frac{1}{(1+x)^2}$ for all $|x| < 1$.

(A) True (B) False (C) Not enough information to determine

Differentiate: $\frac{d}{dx}\left(\frac{-1}{1+x}\right) = \frac{1}{(1+x)^2}$