

Show your work in the space provided. Use the back of the page if necessary.

Name: _____

1. (4 points) Let $f(x) = x^{x^{x^{\dots}}}$. Find the derivative $f'(x)$.

2. (4 points) Let $g(x) = \sqrt{x + \sqrt{x + \sqrt{x + \sqrt{x + \dots}}}}$. Find the derivative $g'(x)$.

3. (2 points) Would Maple be a useful tool in solving either of the above problems?