

## Topic 10.14 – Finding Taylor or Maclaurin Series for a Function

For the following, use the definition to find the Taylor (or Maclaurin) series centered at  $c$  for the function. When writing your answers, be sure to list the first 4 non-zero terms and the general term.

1.)  $f(x) = e^{3x}$ ,  $c = 0$

2.)  $f(x) = e^{-3x}$ ,  $c = 0$

3.)  $f(x) = \sin 2x$ ,  $c = 0$

4.)  $f(x) = \cos x$ ,  $c = \frac{\pi}{4}$