

1. [8 points] For each of the statements below, circle “**True**” if the statement is *always* true. Otherwise circle “**False**”. You do not need to show any work for this problem.

a. [2 points] All even degree polynomials are even functions.

True

 False

b. [2 points] If k is a positive constant, then the graph of $y = k \ln x$ is concave down.

 True

False

c. [2 points] If $g(x) = e^x$ then $g^{-1}(x) = e^{-x}$ for all values of x .

True

 False

d. [2 points] As $x \rightarrow \infty$, the function $m(x) = (1.05)^x$ dominates the function $d(x) = 419x^{2012}$.

 True

False