Name: _____ **Student#:** _____**Date:** _____

COMP 2711: Discrete Mathematical Tools for Computer Science

In Class Exercise #17

1. Find the least integer *n* such that *f(x)* is $O(x^n)$ for each of these functions.

(a) $f(x) = 2x^2 + x^3 \log x$
(b) $f(x) = 3x^5 + (\log x)^4$
(c) $f(x) = (x^4 + x^2 + 1) / (x^4 + 1)$
(d) $f(x) = (x^3 + 5 \log x) / (x^4 + 1)$