CS:3330 Practice for Quiz 1, Spring 2017

1. The function $n \cdot \log_2(n)$ asymptotically _____ that $n^{3/2}$:
   (a) grows faster
   (b) grows more slowly
   (c) grows at the same rate
2. $2^{\log_3 n}$ can be simplied to a
   (a) logarithmic function
   (b) polynomial function
   (c) exponential function
   (d) sublinear function
3. $2^{\log_2(\log_2 n)}$ can be simplied to a
   (a) logarithmic function
   (b) polynomial function
   (c) exponential function
   (d) sublinear function
4. The function 2^{n^2} asymptotically _____ that n^{100}:
   (a) grows faster
   (b) grows more slowly
   (c) grows at the same rate
5. The function $(\log_2(n))^{\log_2(n)}$ asymptotically _____ that n^3:
   (a) grows faster
   (b) grows more slowly
   (c) grows at the same rate