$\mathcal{O}, \Omega,$ and Θ oh my!

Give a formal proof of each of the following statements, along with the scratch-work to find the c and n_0.

(a) $5n + 7$ is $O(n)$

(b) $3n^2 - 17n$ is $O(n^2)$

(c) $\log_5(n)$ is $\Omega(\log_3(n))$

(d) $2n^3 + 3$ is $\Theta(n^3)$