

### R-3.17

By the definition of big-Omega, we need to find a real constant  $c > 0$  and an integer constant  $n_0 \geq 1$  such that  $n^3 \log n \geq cn^3$  for  $n \geq n_0$ . Choosing  $c = 1/2$  and  $n_0 = 1$ , shows  $n^3 \log n \geq cn^3$ .