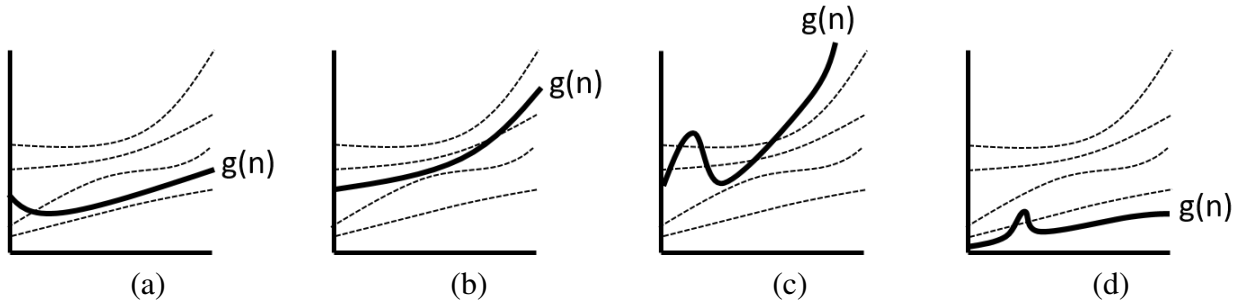


## Practice with Asymptotic Analysis

In each of the following graphs, the dotted lines represented the runtimes for different inputs to an algorithm. The thick solid line is some function  $g(n)$ .



For each of the following statements, choose the graph(s) that accurately depict the statement.

1. The worst case runtime for my algorithm is  $O(g(n))$ .
2. The worst case runtime for my algorithm is  $\Omega(g(n))$ .
3. The best case runtime for my algorithm is  $O(g(n))$ .
4. The best case runtime for my algorithm is  $\Omega(g(n))$ .
5. Every input to my algorithm requires at least time proportional to  $g(n)$ .
6. There's some input to my algorithm that takes at least time proportional to  $g(n)$ .