c \* g(n)

f(n)

f(n) <= c \* g(n)

Big O Notation is used to discuss the worst case (upper bounds)

f(n)

c \* g(n)

f(n) >= c \* g(n)

Big Omega is used to discuss Best Case (Lower Bound)

c2 \* g(n)

f(n)

c1 \* g(n)

c1 \* g(n) <= f(n) <= c2 \* g(n)

Theta Notation is used to discuss Average Case