Damping and Amplitude

Quiz: Consider the equation

\[ \ddot{x} + b\dot{x} + 2x = \cos(t). \]

If the damping constant \(b\) starts at 1 and is increased, what happens to the amplitude of the solution?

Choices:

a) It increases.
b) It decreases.
c) It stays the same.

Pick what you think is the correct choice and then look at the answer.