Answer on Question#52047, Physics, Quantum Mechanics

Given the equation of the damped harmonic oscillator $ma = -bv - kx$, we know that each term on the left or on the right of equality sign must have the same dimension. The dimension of ma is $kg \cdot \frac{m}{s^2}$ in SI system.

Since x in kx term has dimension m, then if k has unknown dimension A, $A \cdot m = kg \cdot \frac{m}{s^2}$, from where the dimension of k is $\frac{kg}{s^2}$ (the last variant from the given list).