# Written Homework Problems §4.10

21 problems for 42 points

§4.10 #467, 470,471,474,476,477,478,481,484,485,487,490,491,493,495,498,499,505,507

**Problem A:** Solve the initial value problem when $\frac{dy}{dx} = ke^x$ and $y(0) = A$. (Assume $k$ and $A$ are fixed constants.

**Problem B:** A projectile is shot vertically upward from a point 2 meters above ground level. If the velocity of the projectile is given by $v(t) = 24 - 9.8t$ where $t$ is measured in seconds after launch and $v$ is measured in meters per second, find an equation for the position of the projectile and use that equation to determine the height of the projectile 2 seconds after launch.