

Written Homework Problems §4.10

16 problems for 32 points

Problems in red are optional extra practice.

§4.10 #467,470,471,474,476,477,478,481,484,485,487,490,491,493,495,498,499,501,505,507

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.