



Quiz #5
MA 238-02

Name: _____
 2/6/09

1. (a) Given $\frac{dy}{dx} = \frac{1}{2}(x^2+y^2)$, draw short slope lines at the points $(x, y) = (0, 0), (1, 0), (0, 1), (1, 1)$.

(b) Draw three solution curves in the above given slope field that pass through the points $(x, y) = (0, \frac{3}{2}), (0, 0), (0, -\frac{3}{2})$.

2. Let $y = y(x)$ be the solution of $\frac{dy}{dx} = -4x + y^2$ with $y(0) = 2$. Use the Euler's method with the step size $h = \frac{1}{2}$ to compute an approximate value for $y(\frac{3}{2})$.