Calculus AB

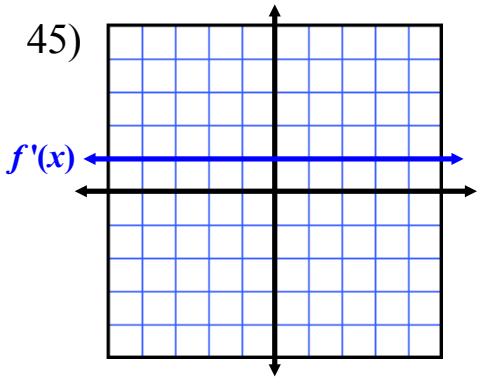
4-1

Antidifferentiation and Indefinite Integrals

(Day 2)

The graph of the derivative is given. Sketch the graphs of two functions that have the given derivative. (pg 256)

45)



Find the equation for y, given the derivative and the indicated point on the curve.

50) $\frac{dy}{dx} = 2(x - 1)$; (3,2)

Solve the differential equation.

60) $f'(x) = 10x - 12x^2$; $f(3) = 2$

72) Show that the height above the ground of an object thrown upward from a point s_0 meters above the ground with an initial velocity of v_0 meters per second is given by the function $f(t) = -16t^2 + v_0t + s_0$.

Consider a particle moving along the x-axis where $x(t)$ is the position of the particle at time t.

78) $x(t) = (t - 1)(t - 1)^2$ [0, 5]

a) Find the velocity and acceleration of the particle.

b) Find the open t-intervals on which the particle is moving to the right.

c) Find the velocity of the particle when the acceleration is 0.

Assignment:
pg 256
47 - 63 odd
70
71 - 87 even