3. (continued)

d. [4 points] Give a practical interpretation of the formula
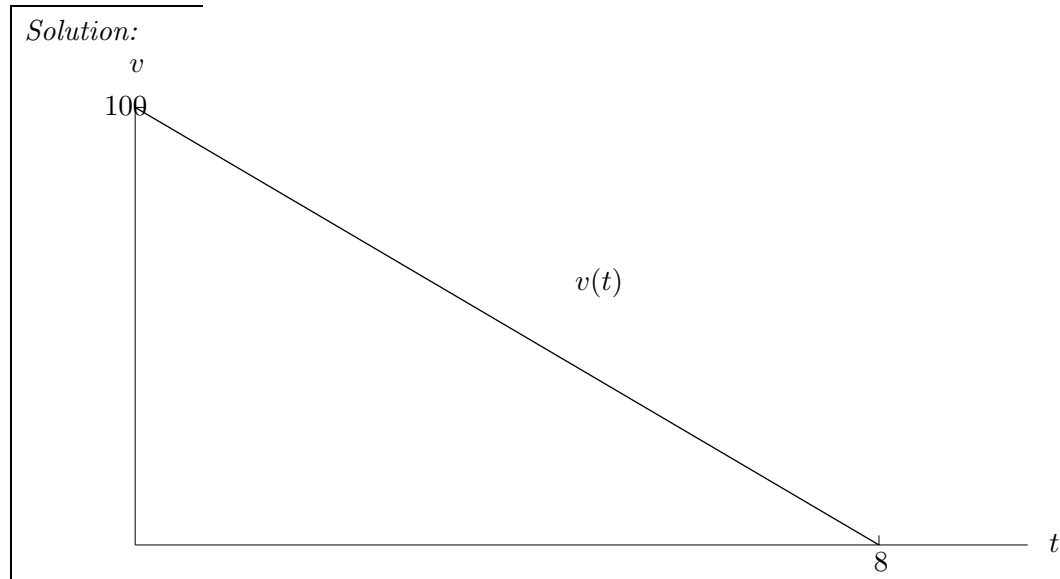
$$g'(3.5) = -3500$$

that begins with

"If Eddie and Laura decrease the price of the soup from \$3.50 per liter to \$3.40 per liter ..."

Solution: ... they expect to sell about 350 more liters of Minestromnia.

4. [6 points] A car, initially going 100 feet per second, brakes at a constant rate (constant negative acceleration), coming to a stop in 8 seconds. Let t be the time in seconds after the car started to brake.

a. [3 points] Sketch a graph of the velocity of the car from $t = 0$ to $t = 8$, being sure to include labels.

Solution:

b. [3 points] Exactly how far does the car travel? Make it clear how you obtained your answer.

Solution: It's $\int_0^8 v(t)dt$, which is the area of the triangle above: $\frac{1}{2} * 100 * 8 = 400$ ft.