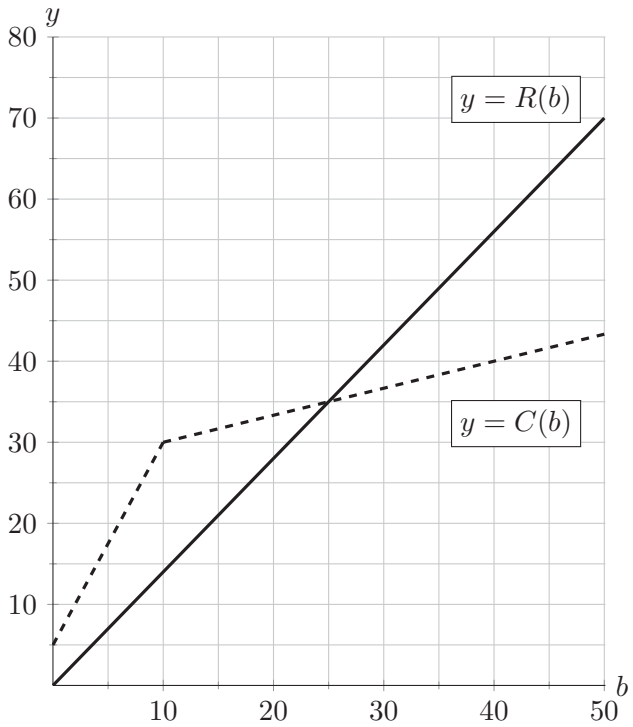
Note: exam problem numbering is off by 1

7. [10 points] A local bakery makes and sells bagels. When they make and sell b bagels in a given day, their cost is $C(b)$ dollars and their revenue is $R(b)$ dollars. Below, $R(b)$ is graphed as solid line, while $C(b)$ is graphed as a dashed line. Note that the bakery only has the capability to make up to 50 bagels each day.



a. [1 point] What are the company's fixed costs, in dollars?

Answer: 5

b. [2 points] What is the selling price, in dollars, of each bagel?

Answer: 1.4

c. [2 points] Find the marginal cost, in dollars per bagel, at $b = 20$ bagels.

Answer: $\frac{1}{3}$

d. [2 points] Estimate the bakery's daily profit, in dollars, if they produce and sell 40 bagels.

Answer: ≈ 16

e. [2 points] How many bagels should the bakery produce and sell each day if they want to maximize their profit?

Answer: 50

f. [1 point] How many bagels would the bakery have to produce and sell each day to **minimize** their profit (that is, maximize their losses)?

Answer: 10