Homework #2

I am rewriting these homework problems. Sorry for the inconvenience. Please check back soon.

Do this too! Suppose that the simple society of Greenville can produce rice and beans. Suppose also that the Greenville's production possibilities frontier is given by the equation:

$$\text{PPF}: \quad \text{rice} = 18 - \frac{1}{2}\text{beans}^2$$

a. Placing beans on the horizontal axis and rice on the vertical axis, graph Greenville's PPF.

b. Suppose the relative price of beans is: $2\frac{\text{rice}}{\text{beans}}$. Using the Calculus Tricks you learned in the first lecture, find the quantities of rice and beans that Greenville should produce at that relative price.

c. Now suppose the relative price of beans rises to: $4\frac{\text{rice}}{\text{beans}}$. Should Greenville produce more or less rice? Should Greenville produce more or less beans? What quantities of rice and beans should Greenville produce at that relative price?

d. At what relative price of beans should Greenville specialize in the production of beans and produce no rice at all?

continued on the next page ...

Do this too! In the story of Colleen and Bill on p. 28–29 of Case/Fair *Principles*..., there's an **error**. The book says Bill and Colleen produce logs and bushels of food at the following rates:

	Production per day	
	Colleen	Bill
food (bushels)	10	8
fuel (logs)	10	5

The book also says that Bill and Colleen value bushels of food and logs equally, so that the price of one bushel equals the price of one log.

- Despite what is written,
  - Bill gains from trade with Colleen, but
  - Colleen doesn't gain from trade with Bill.
  - However, she doesn't lose by trading with Bill.
- Why doesn't Colleen gain from trade?
- Leaving opportunity costs unchanged, how can the story be rewritten, so that both Bill and Colleen gain from trade?

Hint: How does the assumption that Bill and Colleen value bushels of food and logs equally prevent Colleen from gaining from trade (given the production rates given above)?