

Module 5 - Tiered Commission Plans at Ebay

Background

- Affiliate Marketing programs are a popular way for web-based companies to get exposure and to drive more business to their site. Amazon and eBay are two well-known online retailers that use affiliate programs. If you are an Amazon affiliate, you place tagged links to Amazon products on your website. If a visitor to your site clicks the link and then buys the product at Amazon within a certain amount of time, you get a check for a (small) percentage of the sale. You are acting as a salesperson for Amazon and the money you earn is your commission.
- Other affiliate programs have different conditions. For example, at one point, eBay had a program that was based on how many “active, confirmed, registered eBay users” (ACRUs) an affiliate website generated.

Here’s an example:

One of the eBay affiliates is <https://thekneeslider.com/motorcycles-for-sale/>. If someone clicks on an eBay link from that site, goes to eBay, creates an account and makes a bid in an auction or executes a “buy it now,” that person has become an ACRU.

Part 1

The payment structure was based on monthly volume of ACRUs. The affiliate earned \$2.47 per ACRU for the first 49 ACRUs in a month and \$3.99 per ACRU for the 50th through 1,999th ACRUs in a month. The full payment schedule below:

Total ACRUs recruited	Compensation per ACRU
0 - 49	\$2.47
50 - 1999	\$3.99
2000 - 29999	\$4.48

30000+	\$5.00
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1) Fill in the following table

ACRUs in a Month	Total Payment Earned
20	
51	\$ 129.01
1,500	
25,000	
35,000	

- 2) Create graphs in Excel that shows the total payment earned as a function of ACRUs in a month.
 - a. First use a range of ACRUs from 45 to 55.
 - b. Now change the range of ACRUs to be from 0 to 32,000.
 - c. Do the graphs look like you expected? Why or why not?

- 3) What is the minimum number of ACRUs an affiliate would have to generate to earn \$5,000? (Your answer should be a whole number)

- 4) Let's say that eBay changed the commission plan from the original one given above to raise every level of commission (per ACRU) by \$1.00. That is, instead of paying \$2.47 per ACRU for the first 49, they paid \$3.47. And instead of paying \$3.99 at the next level, they paid \$4.99 (and so on).

Part 2

Consider the following definitions:

Marginal tax rate refers to the highest tax rate one will pay on their last dollar of income. *For example, in the context of Module 4, it would be the tax rate of the highest bracket you reach given your total income.*

Progressive tax is where the average tax rate (taxes/income) increases as taxable income increases.

Regressive tax is where the average tax rate (taxes/income) decreases as taxable income increases.

- 1) Which of the following statements comparing this eBay commission plan to the US personal income tax code are true?
 - a. In the tax code, the marginal tax rate is **decreasing**. In the commission plan, the marginal commission rate is also **decreasing**.
 - b. In the tax code, the marginal tax rate is **decreasing**. In the commission plan, the marginal commission rate is **increasing**.
 - c. In the tax code, the marginal tax rate is **increasing**. In the commission plan, the marginal commission rate is also **increasing**.
 - d. In the tax code, the marginal tax rate is **increasing**. In the commission plan, the marginal commission rate is **decreasing**.

- 2) In the context of tax rates, **what would it mean for the marginal rate to be decreasing?** Select all that are true.
 - a. People with a higher income level pay a **lower marginal rate** than people with a lower income level.
 - b. People with a higher income level pay a **higher marginal rate** than people with a lower income level.

- c. How many times do the graphs of these two plans [where the graph for each one is total commission earned (on the y axis) as a function of the number of ACRUs (on the x axis)] intersect?

- 6) In this comparison, consider these graphs for the US personal income tax code and the eBay commission plan given in Part 1.
- For the tax code, use the graph of total tax paid (on the y axis) as a function of total income (on the x axis).
 - For the eBay commission plan, use the graph of total commission earned (on the y axis) as a function of the number of ACRUs (on the x axis).

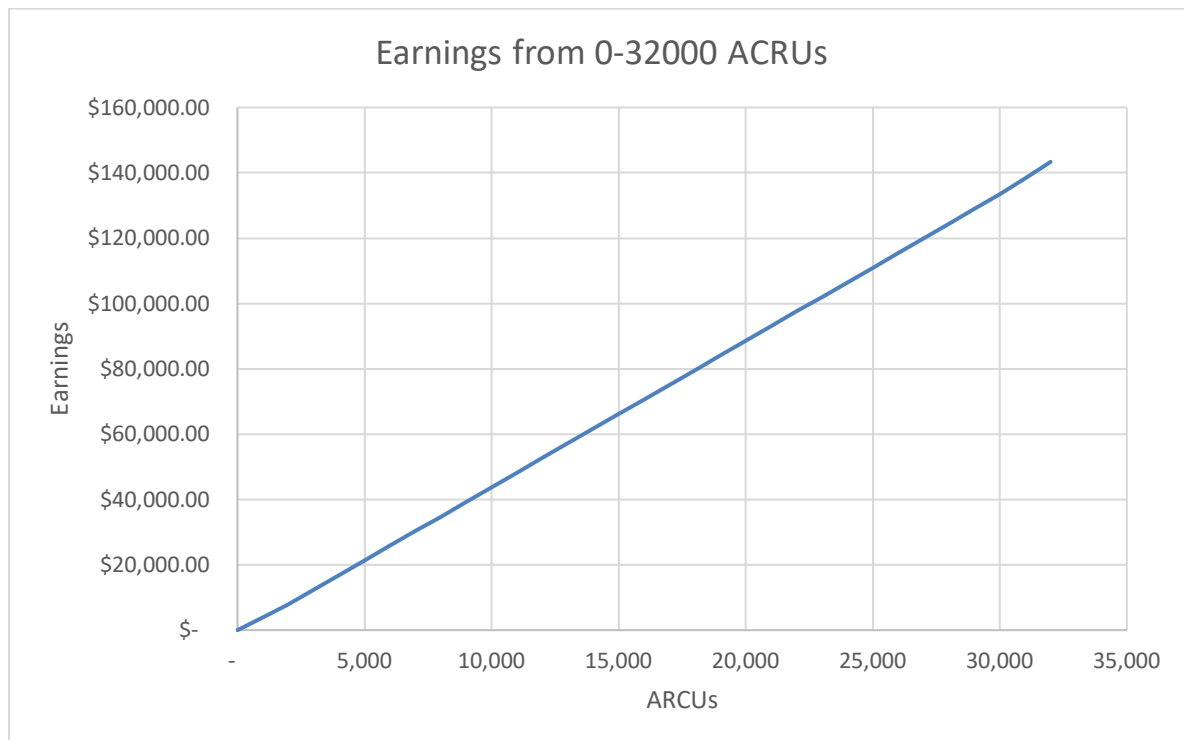
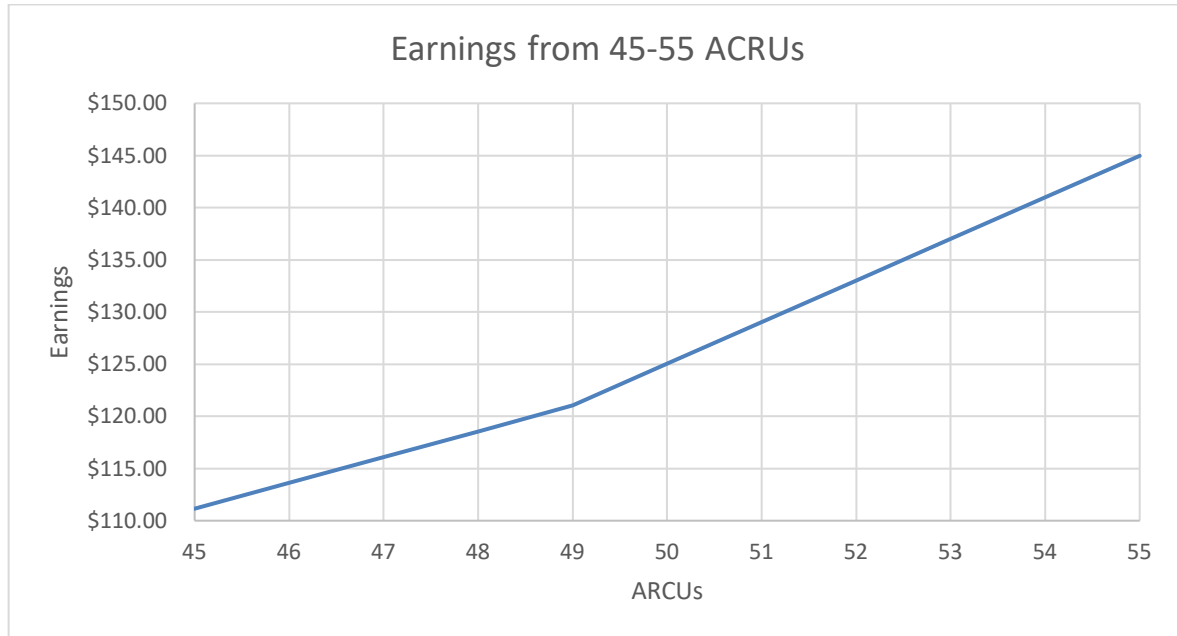
Which one the following statements are true?

- a. For the tax code, part of the graph has a **slope of 0**. For the commission plan, part of the graph also has a **slope of 0**.
 - b. For the tax code, part of the graph has a **slope of 0**. For the commission plan, **none of the graphs have a slope of 0**.
 - c. For the tax code, **none of the graphs have a slope of 0**. For the commission plan, part of the graph **has a slope of 0**.
 - d. For the tax code, **none of the graphs have a slope of 0**. For the commission plan, **none of the graphs have a slope of 0**.
- 7) Which of the following is true of the US personal income tax code?
- a. It is regressive.
 - b. It is progressive.
 - c. It is neither regressive nor progressive.
- 8) Which of the following is true? Select all that are true.
- a. If the marginal tax rate is increasing, a tax code is regressive.
 - b. If the marginal tax rate is increasing, a tax code is progressive.
 - c. If the marginal tax rate is decreasing, a tax code is regressive.
 - d. If the marginal tax rate is decreasing, a tax code is progressive.
- 9) Is the eBay commission plan regressive or progressive?

Selected Answers

PART 1:

2)



3)

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4) a)

\$7,909.52

b)

You will never earn the same except when you don't have any ACRUs

PART 2:

1) C

2) A, C

3) C

4) None of them

5)

a) Commission plan in Part 1

b) 153

c) twice, at 0 and at approximately 152.33

6) B

7) B

8) B, C

9) Progressive.

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