

# Starting a Business: High Margin vs. High Volume

**SUBMITTED BY:** Nina Hoe, University of Pennsylvania

**SUBJECT(S):** Computation

**GRADE LEVEL(S):** 9, 10, 11, 12

## ≡ OVERVIEW:

In this lesson, students think about and discuss the relationship between volume/quantity of products sold and the markup for those products. The class discusses the concepts of revenues, pricing and markup, and students break up into small groups to discuss and answer questions about profit, markup and volume. Students then read the Knowledge@Wharton article: “Best Buy vs. Wal-Mart: Is There Room for Both, and Others?” and compare the pricing/markup strategies of the two companies. Then students break into teams to come up with an inventory/stocking plan for a new bike store. Students choose between and strategically combine high and low margin items to maximize profits. The class finishes with students sharing their plans for stocking the store and generating maximum profit, and as a class, students reflect on the different strategies and the reliability of predicting consumer behavior.

## ≡ RELATED ARTICLES:

- [“Wisdom from the Parlor: Ice Cream Entrepreneurs Share Their Struggles”](#)
- [“Three Students Take Their ‘Smart Straw’ to Market and Raise Awareness about Sexual Assault”](#)
- [“Meet the Brightest Young Entrepreneurs: ‘Be Open-minded and Jump at New Opportunities’”](#)
- [“A ‘Sneakerhead’ Shares His Simple Strategy: Buy Low and Sell High”](#)

## NBEA Standard(s):

- Mathematical Foundations
- Number Relationships
- Problem Solving

### **Common Core Standard(s):**

High School Mathematics: Modeling

### **Objectives/Purposes:**

- Students understand the relationship between high margin and high volume businesses.
- Students read about and reflect on Wal-Mart and Best Buy as models for business.
- Students use given figures (costs and suggested retail prices) for different bikes to stock a fictitious bike store with the intent of generating the largest profit.
- Students critically think about how to stock a business and practice presentation skills.

### **Knowledge@Wharton Articles:**

- [“Best Buy vs. Wal-Mart: Is There Room for Both, and Others?”](#)
- [“Death in the Middle: Why Consumers Seek Value at the Top and Bottom of Markets”](#)
- [“The Wal-Mart Empire: A Simple Formula and Unstoppable Growth”](#)

### **Other Resources/Materials:**

- Computer with Internet
- Calculators

### **Activity**

[Student Worksheet](#)

Whole Class Discussion (5 mins)

1. If you are a shop owner, how do you generate “revenues?”

If students are not familiar with the term **revenues**, play the Wharton Global Youth Program Glossary: [Revenues](#).

*“Revenues are the sales of products, merchandise and services that a company makes to customers due to the normal business activities. The Philadelphia Phillies, the 2008 World Series Champions, generated a record-breaking \$216 million in revenues from ticket sales, merchandise and refreshments last year.”*

## 2. What is “pricing?”

Play the WGYG Glossary: [Pricing](#)

*“Pricing is the price a firm sets for the products it sells. Wal-Mart has a pricing policy to be as low or lower than any of the competitors. Wal-Mart will match or beat anyone’s prices.”*

## 3. What is a “markup”?

**Markup** is the difference between the cost of a good or service and its selling price. A markup is added on to the total cost incurred by the producer of a good or service in order to create a profit. Markup can be expressed as a fixed amount or as a percentage of the total cost or selling price. (from Wikipedia: [Markup](#))

Small Group/Pair Discussion (5 -10 mins)

**Have students turn to a partner or break up into small groups to discuss the following questions.**

4. As a storeowner, how do you decide which types or quality of products you will sell? Expensive or inexpensive ones?
5. How do you think you would determine how to mark up different products?
6. How do you think the cost of your products to the consumer will relate to the quantity you hope or expect to sell and vice versa?
7. How will the quantity of the products you sell affect your mark up of those products?
8. Do you think it’s better to sell a lot of products with small mark ups or a few products with large mark ups? Why? Explain your answer. **(Answers will vary, but make sure to have students justify their answers. Is one strategy riskier than the other?)**

Have students report back on their discussion.

***The goal is for students to make a connection between quantity/volume and markup as a fixed amount/profit per item. In simplistic terms, businesses may generate profit from high volume of sales, or from having high margins.***

Play the WGYG Glossary: [High Margin Business](#)

*“A high margin business is a business with high profits. Typically, luxury products such as famous brand perfumes, handbags and cars are high margin businesses.”*

***Generally, if you are selling low-cost goods, but selling a lot of them, you may not have a very high profit margin on each product, but your profit comes from the high volume of products sold. Conversely, if you are selling designer handbags or expensive cars, your markup will be much higher since your volume is much lower.***

***If students are having a difficult time grasping this concept, ask them to think of something that they buy often (ex: a can of Coke). Ask them how much they think the shop owner makes on each can of Coke sold (generally \$0.50 – they buy it for \$0.50 and charge consumers \$1.00.) How many cans of Coke do they sell a day? (Maybe 50 – along with a lot of other low-priced items!) Compare this to how often their family buys a car? How many cars do you think a car dealer sells a day? If a car dealer only sells 1 car every 3 days, the markup would need to be MUCH higher than on a bottle of Coke to make this a profitable business for the owner.)***

Guided Reading (10-15 mins)

Have students read the Knowledge@Wharton Article: [“Best Buy vs. Wal-Mart: Is There Room for Both, and Others?”](#) (If time allows, the K@W Article: [“Death in the Middle: Why Consumers Seek Value at the Top and Bottom of Markets”](#) provides some interesting insight into businesses at both ends of the spectrum.) As they read, have them answer the following questions. Students should also feel free to use their existing knowledge of these companies to answer the questions.

1. What is the pricing/markup strategy of Wal-Mart?
2. What is the pricing/markup strategy of Best Buy?
3. How are the two different? On what do they each rely to generate profit?
4. At which store do you shop?

5. Which company do you think is more successful? Why? How do you define success? What evidence do you have of this?

Small Group/Pair Activity – Computations (15 mins)

You want to open a bicycle shop and you are trying to decide what type of inventory to stock (i.e. you are trying to decide what quality of bikes to sell). In your area, there seems to be a market for a range of different bike qualities. Cheap “cruiser” bikes are very popular, which are inexpensive, one-speed bikes that people ride around town/the city, and might leave outside in the rain, etc. However, it seems like there is definitely a market for higher quality, specialty bikes – ones with multiple gears, lightweight, higher quality metal and that can be ridden around town but also used for exercise or racing.

You need to figure out how many of each type of bike to purchase for your store. Each type of bike costs you a certain amount, and also indicates a suggested retail price. In your group:

1. Decide what combination of bikes you will purchase for your store.
2. Calculate your projected profits from your combinations, based on your estimated volume.
3. Calculate the percentage of your profit that will come from each type of bike.
4. Describe, articulately and in detail, why you chose this particular combination of bikes. Be clear about both advantages and disadvantages.
5. Describe what marketing strategies might you use to promote your bikes.

Bike	Description	Cost to you	Suggested Retail Price	Estimated proportion of people buying this type of bike
Cruiser Bike	1-gear, coaster brakes, cheap frame	\$100	\$150	7/12
Commuting Bike	10-gears, fenders, rack	\$500	\$750	3/12
Racing Bike	21-gears, racing design, aluminum	\$1200	\$1800	1/12

	frame, lightweight			
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**Tying It All Together:**Whole Class Discussion: (5 mins)

1. Have students present their strategies for stocking the bike store.
2. What are the advantages and disadvantages of stocking different combinations of bikes?
3. What population size did you consider? Does it matter?
4. Which combination seems like it will yield the greatest profit?
5. How likely do you think it is that you will sell exactly the number and distribution of bikes predicted?
6. How can you best predict how many bikes you will sell?

**Practice Outside of the Classroom:**

As you shop in all different stores, see if you can tell if the retailer generates revenues based on high volume sales or high margins.

**What Worked and What I Would Do Differently:**

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