

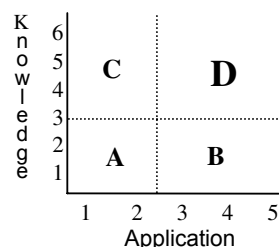
**GOLD
SEAL
LESSON**



OPENING AN INTERNET BUSINESS

Subject(s)
Mathematics

**Rigor/Relevance
Framework**



Grade Level 8–9

**Instructional
Focus**

Number Operation and Concepts: Students use number, number sense, and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.
Problem-Solving and Mathematical Reasoning: Students apply a variety of problem-solving strategies to investigate and solve problems from across the curriculum as well as from practical applications.
Writing: Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Student Learning

- Students will participate in a simulation of the market economy.
- Students will calculate markup percentages for particular products and determine what sales strategy will help them reach their goal profit.
- Students will analyze the current economic situation with what occurred in their simulation.

**Performance
Task**

Overview
Students will learn how to calculate the markup percentage between wholesale and retail prices. Through a business simulation, students will experience the effect of business choices on the bottom line.

Description

1. The concept of marking up a price is a difficult one for many students because most of them have never really considered the practical meaning of the term—especially in terms of percent of markup. To help students understand the concept of markup, begin the class by discussing a real Web site that helps people set up and run an Internet sales business. The first page of the worksheet provides information about getestore.com.
2. To ensure that students know the process of calculating markup, have them work through questions 1–4 on the worksheet or provide your own examples based on real products in which your students may have a particular interest.
3. Begin the simulation. Each student will start an Internet electronics business with no more than \$1,500 with which to buy merchandise listed on the worksheet. Students must decide how many of each item they want to purchase to establish their inventory. Be sure that the students spend as much of their \$1,500 as possible.
4. Students must set the wholesale price of each item. The amount of markup is their decision, but it would be good to have a class discussion about what constitutes a reasonable amount of profit and how their decision could affect sales.
5. To simulate the inventory, every student will make up enough price tags for

Performance Task
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their inventory. This could be done on index cards. Be sure that the back of the card can somehow identify each student without using his or her name. This will help prevent the subsequent sale from becoming a popularity contest! The front of the card must list the name of the item and the retail price. Students may decide to put extra information on their cards to simulate advertising.

6. The teacher should collect all of the price tags and regroup them so that all matching items are together. This will make the following sales activity more time efficient and may make it more difficult for students to know who owns each price tag.
7. Conduct the sale. The teacher should devise a systematic way to conduct the sale ahead of time so that it is organized and fair! Each student now turns into a consumer and must “buy” one of each of the electronic items. Once the student has bought all of their items, he or she should write “SOLD” on the price tag to mark it as such. After all purchases have been made, the teacher should collect all of the tags and return both the SOLD tags and the UNSOLD tags to the student who originally made them.
8. Student business owners will now calculate their profit or loss after the sale. They must consider that their original outlay of close to \$1,500 must be paid back before any profit can be made. A class discussion might be a good idea prior to asking students to make this calculation. The teacher might want to consider giving a token prize for the student whose business showed the greatest percentage of profit.
9. Give students an opportunity to talk about their results with each other. Conclude the activity by asking students to write an evaluation of their business decisions about inventory, markup amounts, and advertising.

Assisting English Language Learners

Writing a series of “I statements” can provide focus and help students chart the progress of both math problems and real-life events. To launch this lesson, provide a clear explanation of “I statements” to English language learners and then ask them to write a list of steps or goal statements in a math journal or worksheet about how they will handle pricing for their business simulation. The list could look like the following:

1. I will buy \$1,500 of electronics merchandise for inventory.
2. I will set the wholesale price of each item.
3. I will determine the retail price of each item (with reasonable markup).
4. I will make price tags that include name of item, price, and additional information.
5. I will purchase one of each of the electronic items from class members’ price tags.
6. I will calculate my profit or loss.

After each step is accomplished, students should state the step and check it off. Encourage students to take notes and pose questions that these steps trigger. If possible, have English language learners work with English-proficient students in pairs or small groups to complete this activity.

Essential Skills

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|-----|---|
| M1 | Perform operations fluently with positive and negative numbers, including decimals, ratios, percents, and fractions, and show reasoning to justify results. |
| M21 | Evaluate and employ accurate and appropriate procedures for statistical data collection, organization, analysis, and display including making estimates and predictions, critiquing data, and drawing inferences (e.g., using the normal curve and z-scores, line of best fit). |
| E3 | Follow oral directions. |
| E2 | Read for main ideas and supporting details and discriminate important ideas from unimportant ideas to aid comprehension. |
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**Attachments/
Resources**

Open Your Own Internet Business Worksheet.

Submitted by: Angel Williford, Angie Camp, Jefferson County High School

Scoring Guide

Score each of the following characteristics on a scale of 4 to 0 , where 4 = surpasses expectations; 3 = high-quality performance; 2 = satisfactory performance; 1 = minimum-quality performance; 0 = does not meet expectations				
Criteria	Trial Scores			
	1	2	3	4
Student calculates percent of markup accurately.				
Student can apply the concept of markup to problem solving.				
Student participates adequately in all phases of the simulation activity.				
Student calculates profit or loss accurately.				
Student writes a valid evaluation of his or her business decisions.				

Open Your Own Internet Business

A quick search on the Internet can show you how many business opportunities are offered. Beware! Some of these offers may be scams but, as demonstrated by eBay, there are legitimate ways to operate a retail business via the Internet. Getestore.com is a Web site that claims to help you set up an electronics store. This is from their home page:

Now you can open your own Online Store instantly and receive a free domain name of your choice!

Getestore.com provides you with an opportunity to operate your very own Internet Shopping Mall pre-stocked with brand names such as Sony, Panasonic, Toshiba, JVC, Olympus, Xbox, As Seen on TV and more at wholesale/distributor pricing.

You mark up **your own price** - You make **75-150% profit**, without ever buying products or fulfilling orders. Two examples of the profit you can make are shown below:

Xbox LCD Monitor

Wholesale price: \$64.99
Retail price: \$139.99
You make: \$75.00

Minnie Mouse Desk Phone

Wholesale price: \$29.99
Retail price: \$49.99
You make: \$20.00

1. Calculate the percent of markup on the Xbox LCD Monitor.
2. Calculate the percent of markup on the Minnie Mouse Desk phone.
3. The Web site Eetimes.com reports global news for the creators of technology. Eetimes reported that the typical retail price for the Xbox 360 wireless controller is \$50, but it only costs an estimated \$11 to create. When \$3 is included for shipping, advertising, and other costs and \$6 is added for the manufacturer's profit, the wholesale price is estimated to be approximately \$20.

If the \$20 wholesale price is marked up to a retail price of \$50, what is the percent of markup?
4. One Internet Web site listed their wholesale price for the Xbox 360 Console as \$109—only available for customers who bought a large quantity of them. A survey of Internet stores showed that the typical retail price of that same Xbox 360 Console was \$325. Calculate the percent of markup.

After seeing the profit that can be made from selling electronics, you decide to take \$1,500 out of your college fund to set up a Web-based electronics store specializing in entertainment equipment. You buy your inventory from this list.

5. You must keep good business records! Complete the spreadsheet below, showing the item purchased, the

Item	Price
1 CD player	
1 television	
1 MP3 player	
1 DVD player	
1 X-box	
1 X-box game	
Total Spent	

quantity purchased, the item price, and the total amount spent. Try to spend the entire \$1,500. You may choose to create a computer spreadsheet to accomplish this.

Item	Quantity	Price Per Item	Total Cost
Total Amount Spent:			

6. Now you must set a retail price for each of your items. You should make the retail price reasonable enough to attract buyers but high enough to make a good profit. Make a price tag on an index card for each item. For example, if you have 5 televisions to sell, you must make up 5 index cards. Write your student number on the back of each card. Make sure that you list the item name and the retail price on the front of the card. You might choose to decorate your card like an advertisement. You can even do this on a computer if you want to. Hand the cards to your teacher who will group the same items together to make shopping more efficient.

7. Now it is time to shop!

Every student in the class will go shopping for the same items: one CD player, one television, one MP3 player, one DVD player, one X-box, and one X-box game. Naturally, you, as a buyer, want to get a good deal! Make sure to pick up and keep the index card for each of the six items. Write "SOLD" on each card.

Follow your teacher's directions so that this shopping spree proceeds fairly.

After you have all of your purchases, record the prices from your index cards in the table and calculate how much you have spent.

Item	Price
1 CD player	
1 television	
1 MP3 player	
1 DVD player	
1 X-box	
1 X-box game	
Total Spent	

Who was the best shopper in your class?

8. Next, each business owner must complete their business records for the day. Follow your teacher's directions so that you get back "SOLD" index cards for the items that were purchased from you. You should also get back the index cards for the items that you did not sell. Complete the spreadsheet to record your transactions.

Item	Number Sold	Wholesale Price	Your Retail Price	Percent of Markup	Value of Today's Sales
CD Player		\$ 25			
13" Television		\$ 125			
MP3 player		\$ 60			
DVD player		\$ 35			
Xbox		\$ 130			
Xbox game		\$ 10			

9. Now, calculate your financial situation after today's sale. Remember that you began by paying out close to \$1,500 just to buy your inventory. Have you made back that amount of money yet? Calculate the percent of your original investment that you have now.

10. Write an evaluation of your business strategy based on the categories listed. Be sure to write how you think your business decisions affected the amount of money that you made. Write about things that you would change or things that you would keep the same.

After looking at your sales and your profit or loss, evaluate the types of items that you originally bought for your inventory.

Before the sale started, you decided on a set retail price for each of your items. Evaluate the effect that your pricing had on your sales.

Some students decorated their price tags with advertising. Did the decorated price tags sell better than the plain price tags? Write your observations about the effect of advertising on sales.

Evaluate your markup strategy and its effect on your total profit or loss.
