In early 2011, the Math Forum launched a portal dedicated to sharing resources for incorporating financial education into mathematics classrooms with the support of the FINRA Investor Education Foundation. This work is based on collaborations among mathematics educators, financial educators, and Math Forum staff members.

The resources on this site include Problems of the Week that have a financial context, Math Tools that can be used to explore financial concepts using technology, and great explanations from Ask Dr. Math about the mathematics underlying financial concepts. The content is organized by mathematics topic or financial topic, so if you want to find problems to use in your class when you are teaching linear equations, you can look at different finance topics using that mathematics, or if you want to incorporate ideas about banking, you can explore all of the math topics connected to the banking resources we have.

We also offer a 6-week Professional Development Course, *Incorporating Financial Education into the Math Classroom*, that explores problem solving activities that can help students engage with financially-situated math. The course also introduces software tools that encourage exploration of financial topics and the learning of particular math concepts. The next workshop will be offered in June 2011.

To learn more about our Financial Education Professional Development Opportunities go to:

http://mathforum.org/fe/courses/

**An Example**

Dr. Math Explains Comparing Prices

Whether something is a better buy depends on how it fits your needs. If you could get a can of tuna for $1.59, or a ton of tuna, all in one big can, for $100, the ton would definitely be less expensive per pound... but what could you do with it? It would start spoiling as soon as you opened it, so most of your $100 would be wasted.

Having said that, note that when we divide two numbers with different units, we get a ratio, e.g.,

- 26 miles in 1/2 hour = 52 miles/hour
- 38 grams in 19 cubic inches = 2 grams/cubic inch

Similarly, we can get a ratio like

$1.59 in 6 ounces = (1.59/6)$ dollars/ounce

If we compute that for two different combinations, we can compare the results to find out which is cheaper.

Note that we can compute either dollars per ounce, or ounces per dollar. In the former case, we want the smaller ratio. In the latter case, we want the larger ratio.

However, having said that, the easiest way to compare two prices like this is to convert them to a common quantity. That is, if I buy three 3-ounce cans for $2.19, that’s 9 ounces for $2.19. If I double it, I get 18 ounces for $4.38.

If I buy one 6-ounce can for $1.59, I can triple that to get 18 ounces for 3 times $1.59. Then the comparison is easy. Which way do I pay less for 18 ounces?
Val’s Values

Amir: Hey Val, check out my cool new jacket!
Val: Another new jacket? Don’t you have to get a new one every year?
Amir: My jackets last about a year and a half. And each one only costs about $60. Isn’t your jacket one of those really expensive ones?
Val: It cost about $300, but I’ve had my jacket for 8 years so far. I bet you have paid more for jackets than I have.

Question: Is Val right? How do you know?

Extra: What price would Amir’s jackets have to be for him to spend the same amount as Val? What assumptions did you have to make about their jackets to solve the problem?

From Here to There

Recently I traveled to the city of Graphton, and after I landed at the airport I needed to get downtown to my hotel. I investigated my ground transportation options, and found the following:

- A bus runs from the airport and stops at all downtown hotels for a $15.00 fee.
- Taxis in Graphton charge an initial fee of $2.00 for the first 1/4 mile or fraction thereof plus $0.50 for each additional 1/4 mile or fraction thereof.
- A motorcycle shuttle (with sidecar for luggage) charges an initial fee of $3.00 plus an additional one cent per second.

For each transportation option, pick the graph below that you think best illustrates the cost of riding it to my hotel. For each graph you choose, explain why you think it’s the best fit and include the units that you would put on each axis.

Extra: Under what conditions would all three options cost the same to get from the airport to the hotel? Explain your thinking.

Our Thanks

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