

## Learning Project **6** Fractions, Proportions and Percents

### Inquiry Activity 6-5: More Multi-step Problems and Percents

*(Note: The italicized portion is directed to the learners.)*

#### 1. Identifying the Problem (Item # 12, PA) Calculator allowed

*Read the question carefully, as you would if taking the actual test.*

12. Susan left \$650 in a savings account for one year. At the end of that time she received an interest credit of 5%. Then she withdrew all of her money and had to pay a service charge of \$1.75. How much money did she have after paying the service charge?

- (1) \$ 648.25
- (2) \$ 653.25
- (3) \$ 680.75
- (4) \$ 682.50
- (5) \$ 684.25

**Calculator  
Allowed**



*Here are some problem clarification questions you may want to consider when reading test questions.*

*What words and/or symbols might be important to understand to answer this problem and what are they telling you?*

The following, among others, are possibilities: savings account, interest credit, service charge, withdrew.

*What words and/or symbols are unfamiliar and what do you think they mean?*

#### 2. Becoming Familiar with the Problem

*Ask yourself questions like these about the problem, taking note of the ones that were especially helpful so that you can remember to use them when you take the test.*

*Reread the question. What is the problem really asking?*

*Which information in the problem is relevant to what you need to find?*

*What do you know about savings accounts, interest, and service charges?*

*How many math steps might there be to solve this problem?*

#### 3. Planning, Assigning and Performing Tasks

*Try to answer the test question any way you can, even if you have to guess, but try to be aware of the reasoning and operations that you are using. The following directions and questions can be helpful.*

*Use your experience with similar problems to make sense of this one.*

*Restate the problem using fewer words.*

*What math operations are involved with interest?*

*Break the problem down into parts.*



*In this problem, do you deduct the service charge before or after you calculate interest gained?*

*Estimate an answer and be aware of the steps you used to estimate.*

*Eliminate unreasonable answer choices.*

*Do the work to find an answer.*

*Can the calculator help you find an answer?*

*Is the answer reasonable?*

*Compare your answer to your estimation.*

*Choose an answer.*

*Be ready to defend your answer (whether you worked individually or with someone else) and the way you found it.*

#### 4. Sharing with Others: Class Discussion of Results

***Telling other people what you know helps you to understand the material better. So take this opportunity not only to share your knowledge, but also to learn it more completely.***

***Small groups:*** Compare your answer to others in the group and explain why and how you found it and why you think it is correct.

*Agree on how the problem can be broken down into smaller, more manageable steps.*

*Agree on the correct answer and the step-by-step process used to find that answer.*

*Explain how the calculator can help in the solution of the problem.*

*Do some research in the math texts and find at least two different examples of how to do this kind of a percent problem. Compare this to the research you did on percents in the Inquiry Activity 6-4. Remember to cite the text name and page number that you used.*

***Whole Class:*** Report to the class your determinations of the steps you decided on to answer this question, the estimation process used, why the incorrect answer choices are wrong, and any other subject brought up during the small group discussion.

*At the completion of all the group presentations, the class should review the textbook explanations of how to perform this kind of percentage problem.*

#### 5. Reflecting, Extending and Evaluating

***Reflecting:*** Think about what you learned.

***Here are some questions to start you thinking about the experience you just had. Thinking about what you have learned and experienced is part of the learning process. When the focus is only on the answer, you don't get much time to think about what was learned.***

*What were some of the reading skills you used while going through step 1, Identifying the Problem?*

*What were some of the thinking skills you used while breaking the problems into parts? (In other words, how did you go about thinking about the problem? List all the steps.)*

*What new insights about math did you gain from thinking through this multi-step problem?*

***Extending:*** Extend what you learned to new situations.

***In extending, you are being asked to transfer the information presented in the Practice Test question to other information or situations you already know about and maybe making new connections to other information.***

*Did you think about the previous Inquiry Activity when you were doing this one?*

*Did you use some of the information or concepts learned there as prior knowledge for this Inquiry Activity?*

*What in this Inquiry Activity is similar to and what is different from the previous Inquiry Activity?*

You as instructor should build more questions into this section since you may change the order in which the Learning Projects are presented. The following are just suggestions. Feel free to substitute specific references to Learning Projects not mentioned here.

*Solve this problem in ways that may not be textbook related. Your instructor will break you up into groups. Each group is to perform the following tasks:*

*Come up with as many different ways as possible to solve this Practice Test Problem. Make sure that the group shows all the steps in these other solutions.*

*Research what the textbook says is the way to solve the problem. Note the textbook and page number where this information is found.*

*Compare all the approaches and determine which is the most efficient way to solve the problem.*

*Compare all the approaches and determine which is the most efficient way to solve a similar problem on the GED Test.*

*Expand on what you know about the situation indicated in the problem (savings accounts, and interest) and also to transfer the math learned to other situations in which the math may be used.*

*Discuss other savings account situations that are similar to the one presented in the problem.*

*Discuss how to use the math used in this problem in those other situations. (For instance what happens if Susan only kept the money in the account for 6 months?)*

*List other situations (not savings accounts) in which the math can be used and determine how to use the math in those other situations.*

***Evaluating: Assess what you learned and how you learned it.***

***In this last step, you get a chance to review both the content of what you learned and the methods used to learn. There are no right or wrong answers to these questions; it is your chance to look more closely at your learning style and the opportunity to state how you benefited or didn't benefit from the content and/or the methods to help you pass the GED test.***

*What do you now know about proportions and percents that you did not know before you started this Learning Project.*

*What more would you like to learn? (Ask the facilitator for practice items.)*

*What test-taking strategies do you think you will use when taking the GED test? Explain.*

*How have the math reading and thinking skills used in these Learning Projects prepared you for taking the GED test. Explain.*