

Area/Skill - Mathematics	Cognitive Skill Level - Application	Correlation to Framework - 05.04/05.16	Lesson Number - 32
<p>Activity Title - How Much Grass Should I Buy?</p> <p>Goal/Objective</p> <p>To increase a student's skill in applying formulas to real-life situations.</p> <p>Lesson Outline</p> <p>Introduction</p> <p>Real-life situations often require the use of formulas. Builders, carpenters, carpet and tile installers, and landscapers all use formulas as part of their jobs.</p> <p>Activity</p> <p>Provide students with a real-life scenario in which they must access information, select an appropriate formula, and calculate an answer. A possible scenario is to explain that you wish to plant grass in a section of your back yard. The section is in the shape of a rectangle. You have measured the length and width, but the grass is sold by the square foot. Have students figure out how much grass is required and the cost of the grass, using an amount per square foot that you provide.</p> <p>Debriefing/Evaluation Activity</p> <p>Have students discuss possible uses of different formulas in their daily lives. You may wish to use the formulas page on the GED Mathematics Test and have students brainstorm real-life uses for each of the formulas.</p>		<p>Materials/Texts/Realia/Handouts</p> <ul style="list-style-type: none"> • Formulas page • Paper and pencils • Newspapers • Measuring tape • Calculators • Graph paper 	
<p>Real-Life Connection</p> <p>Have the students measure a room in their home or school. Have them calculate the area of the room and the cost to carpet and tile the area. Use advertisements from the local newspaper to determine specific costs per foot or yard of carpet or tile.</p>		<p>Extension Activity</p> <p>Have students identify the correct formulas to use for real-life situations. Examples may include such things as:</p> <ul style="list-style-type: none"> • Figuring the amount of fencing for a specific yard • Computing the volume of a cylinder • Computing how much concrete for a circular driveway <p>ESE/ESOL Accommodations</p> <p>Provide students with graph paper so that they can plot the length and width of the lawn and visually see how the area is divided into "square units" or square feet. Help students to "count" the squares in order to make the connection between area and square feet.</p> <p>Allow students to use calculators.</p>	

GED 2002 Teachers' Handbook of Lesson Plans

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Activity Title - How Much Grass Should I Buy?

Introduction

Say: It is possible to determine the area of a rectangle by using the formula - area = length x width. This formula is used often in real-life scenarios. For example, builders, carpenters, carpet and tile installers, and landscapers use the formula for area in their jobs. Even at home we use formulas.

Main Activity

Say: Today, you will help me with a problem that I have. I want to plant grass in a section of my backyard. I have measured the area and know that it is 22.5 feet wide and 48.25 feet long. The grass that I want to use is only sold in square feet. In fact, it is \$2.35 per square foot.

Ask: How much will it cost me to purchase the grass that I need for my yard? What does square foot mean?

Have students solve the problem. Discuss how when figuring area, the result is in “square units.” These may be square inches, square feet, square yards, etc. You may wish to use graph paper to illustrate “square units.” Show students how they can verify their answer by counting the squares in the rectangular shape made by the length and width. Point to and mark with a pen each square as you count them. Make sure that this matches the students' answers.

Debriefing/Evaluation Activity

Ask: What other kinds of formulas do you use in your daily life? Have students discuss the different formulas that they use and how they use them.

Follow-up Lessons/Activities

Provide students with a copy of formulas page from the GED Mathematics Test. Divide the students into groups. Have each group brainstorm a real-life example of how they would use each of the formulas on the page. Have the students share their answers with the class.