Length of the Gaylord Ship

Grab and Go

GED® Mathematics Reasoning

Ratios and Proportions
Extension: Scale Models

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Length of the Gaylord Ship

Lesson Activity

This Grab and Go Activity follows a real-world problem solving approach and is designed to be conducted with your students. You may use this activity as a review for small groups of students or use this activity as part of your lesson with your whole class. Preview the Grab and Go Activity in its entirety before showing it to your students so that you know when to pause the video and allow your students to work the problem.

The first part of the video will introduce the real-world problem at hand as a class challenge. After that, students will be given time to set-up and solve their equation based on the information given in the problem. The last part of the video will show the step-by-step solution to real-world (challenge) problem.

Please note that there are multiple ways to solve a particular word problem. This grab and go will only show one method of solution. It is best practice for teachers to show alternative approaches or solutions to the problem presented in this Grab and Go Activity.

Real-World (Challenge) Problem:

Determine the length of the Gaylord Ship using the beam's length of 45ft and the length to beam ratio of 1:2.

Solution:

$$\frac{1}{2} \diagup \frac{45\text{ft}}{x}$$
$$1x = (2)(45\text{ft})$$
$$x = 90\text{ft}$$
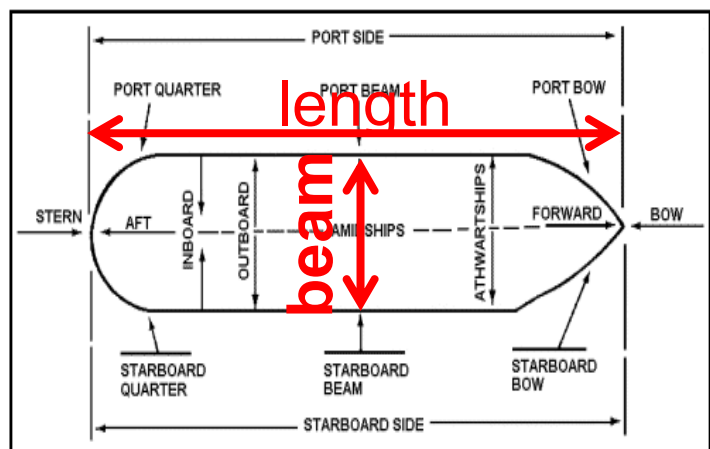
Enrichment:

To extend this activity, students may be asked this additional question:

> If the Gaylord Ship is actually a scaled-down model of an actual ship, how long would the actual ship be, given a scale factor of 1ft:1.25ft?

Additional Problems:

1. Determine the length of a ship using the beam's length of $55\frac{1}{2}$ft and the length to beam ratio of 1:3.

2. A Hot Wheels box shows a scale of 1:64. If the length of the wheelbase of the matchbox car inside the box is 2.15in, how big is the actual car?

3. What is the length-to-beam ratio of a ship that has a beam measure of 50m and a length of 90m?