

Application: Language Arts

Oftentimes, in a theater setting, the stage manager is provided a layout with a scripted play which has been designed for a specific stage. For instance, the drawing might have a scale of $\frac{1}{2}$ inch = 1 foot. One of the props needed is a sofa table. The stage manager measures the drawing and discovers that the table drawn in $2\frac{1}{2}$ inches long by 1 inch wide. How large should the actual table be that is procured for the play?

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Answer: Using proportional reasoning, the stage manager calculates the following:

$$\frac{\frac{1}{2} \text{ inch}}{1 \text{ foot}} \text{ equals } \frac{2\frac{1}{2} \text{ inch}}{x \text{ feet}}$$

$$x = \frac{2\frac{1}{2}}{\frac{1}{2}} \text{ or a length of 5 feet}$$

A similar calculation shows that width should be 2 feet, thus the actual table procured for use in the play should be 5 feet by 2 feet.