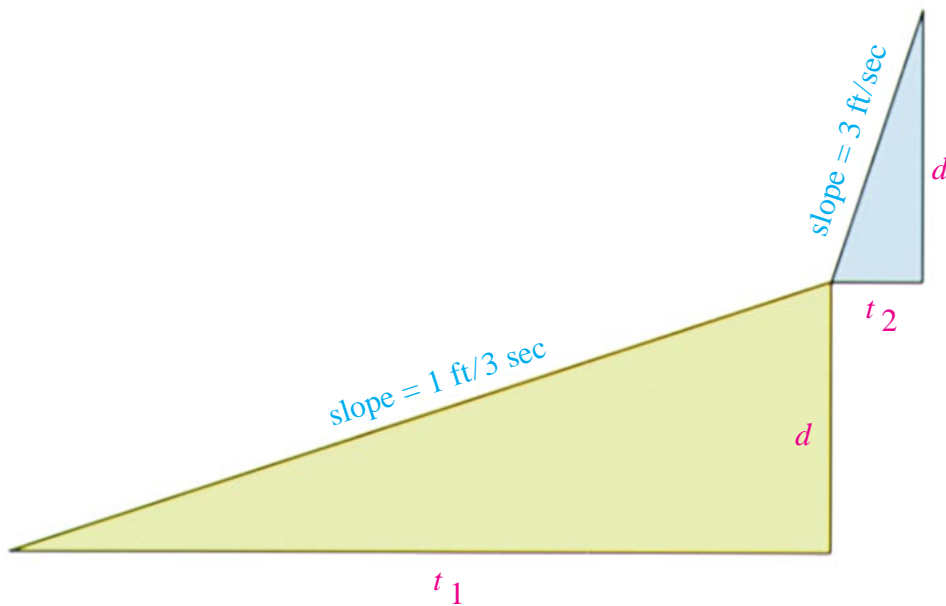


The Two Elevators

Problem-of-the-Week

The Problem

A messenger takes a freight elevator up to the 42nd floor and returns in a passenger elevator. The freight elevator travels at a speed of 1 foot in 3 seconds; the passenger elevator, at 3 feet per second. Find the average speed for the entire trip in feet per minute.



Strategies and Hints

1. Explain how the figure above models the problem.
2. Add a line segment to the figure to represent the unknown speed.
3. Find a way to change the labels in the figure so that d is the only variable.
4. Add two line segments to the figure to show the relationship of the unknown speed to the total distance, $2d$.