

Yale Physics Olympics

Team Name: _____

Vector Sediton

MATERIAL: 1 stopwatch
1 16' tape measure

OBJECT: To travel a marked relay course at specific speeds, arriving back at the starting location in the correct time by following the set of speeds we give you.

METHOD: You are given 4 speeds described below. During the race, each team member must travel at their prescribed speed until he/she reaches the location of the next team member who must then travel at their assigned speed to the next teammate. The last teammate then travels back to the starting point.

You have a stopwatch and tape measure with which you should practice moving at the specified speeds. When you are ready, your team should approach one of the courses and alert a judge you are ready. During judging you must estimate your speed without an electronic timing device.

Speed 1: 4 feet/second
Speed 2: 2 feet/second
Speed 3: 7 feet/second
Speed 4: 0.5 feet/second

SCORING: Your score (smaller is better) will be $\left| \left(T_{\text{Measured}} - T_{\text{Target}} \right) \right|$, where the target speed is the theoretically exact time.

Measured Time (seconds) =