A5 Driving Times

Problem Statement

There are two possible routes from point A to point D. Each route might have up to 10 segments. Each segment is either city streets, non-interstate highways, or Interstate roads. Input the number of segments, then prompt for each length in miles and type of road (C, H, or I).

Input the average speeds, in miles per hour, for City driving, Highway driving, and Inter-state driving. Determine which route takes the least minutes and print the two times.

Then allow the user to change one of the speeds to see the effect on the times and on which route is faster.

Example

Route 1 number: 3
dist: 70 type: I
dist: 55 type: H
dist: 30 type: C
Route 2 number: 2
dist: 70 type: I
dist: 60 type: C
ave speed City: 15
ave speed High: 55
ave speed Inter: 70
output:
First is faster;
240 min; 300 min
Change H 65
First is faster;
230.76 min; 300 min

Route 1 number: 4
dist: 100 type: I
dist: 100 type: H
dist: 50 type: C
Route 2 number: 3
dist: 50 type: H
dist: 200 type: I
dist: 70 type: C
ave speed City: 30
ave speed High: 65
ave speed Inter: 70
output:
Second is faster;
364.615 min; 346.154 min
Change H 55
First is faster;
398.182 min; 354.545 min

Route 1 number: 2
dist: 65.7 type: H
dist: 41.2 type: C
Route 2 number: 1
dist: 140.8 type: I
ave speed City: 20.6
ave speed High: 65
ave speed Inter: 70.4
output:
Second is faster;
180.646 min; 120 min
Change C 41.2
second is faster;
120.646 min; 120 min