Problem #7

Highway Patrol meets Modern Warfare

You live in the year 2030 and the world has become 99% automated. Highway patrol officers have been replaced by unmanned aerial vehicles (UAVs). The job of these is to collect the following information on vehicles traveling down a certain stretch of highway.

Data collected:
License plate number, Time at Checkpoint A, Time at Checkpoint B

[Note: Checkpoint A and Checkpoint B are always 5 miles apart.]
[Note: 1 mile is exactly 5280 ft.]

Currently the state employes analysts to go over the data by hand and determine who receives a ticket and who does not. We want to hurry this process up by only requiring an analyst to enter a few pieces of information into a computer program. We need you to write that program.

Ticket prices are calculated like so: base + fee x <number of mph over the speed limit>
In California in 2030 the base is $150 and the fee per mph over the speed limit is $5

Time on the UAV is kept in the number of minutes past midnight, so 10AM is 10 hours * 60 minutes = 600, 10:30AM = 630, 10PM = 60(12 + 10) = 1320

[Note: speed should be truncated, so a car moving 4.341 mph over the speed limit will be calculated at 4 mph over the speed limit.]

Your program should accept the following input:
License plate number
Time at Checkpoint A (in minutes)
Time at Checkpoint B (in minutes)
Speed limit in the zone (MPH)

We are only interested in who deserves a ticket, not those obeying the law.

Input will terminate with the end of file.

Example:

Input from file:
ABC123 1230 1235 55
DEF456 1230 1237 55

Output:
Issue ticket to ABC123 for $175