

1. The New Telephone Company has the following rate structure for long-distance calls:
 - (a) Any call started after 6:00 P.M. gets a 50% discount.
 - (b) Any call started after 8:00 A.M. is charged full price.
 - (c) All calls are subject to a 4% tax (before any discounts).
 - (d) The regular rate for a call is P 5.00 per minute.
 - (e) Any call longer than 60 minutes receives a 15% discount on its cost (after any other discount is taken but before tax is added).

Write a program that processes several calls by reading the start time for each call and the length of each call. The gross cost (before any discounts or tax) should be printed followed by the net cost (after discounts are deducted and tax is added).

2. A circular racetrack is composed of four portions: concrete, mud, sand, and asphalt. Sly Slick's car takes 30 seconds to cross the concrete, 55 seconds to cross the mud, 47 seconds to cross the sand, and 38 seconds to cross the asphalt.

Make a program segment that will ask for a positive TIME value in seconds and output WHERE in the track Sly's car is. Assume that the race starts at the beginning of the concrete portion. Hint: Where is his car after 50 seconds? After 200 seconds? After 1634 seconds?