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EXERCISES: PHONE COMPANY

The new telephone company Pelo Phone Phun (PPP), has the following rate structure for long distance calls:

Day/night definition:

- Full price, day calls:
  -Any call started at or after 8:00 a.m. (0800 hours) but before 6:00 p.m. (1800 hours).
- ½ price, night calls,:
  -outside day time.

Price:

- The regular rate for a call is $0.40 per minute.
- Any call longer than 60 minutes receives a 15% discount on its cost (after any other discount is subtracted but before tax is added).

Tax:

- All calls are subject to a 4% Federal tax.

A computer program reads the start time for a call based on a 24-hour clock and the length of the call. The gross cost (before any discounts or tax) is printed followed by the net cost (after discounts are deducted and tax is added).
The program will assume only whole number values are input, that the duration is non-negative and the start time represents a real clock time. Results are rounded to the nearest cent.

EXERCISE 1

Write a list of equivalence classes for the input data to this program.

EXERCISE 2

Write a set of test cases in a table to exercise all the equivalence classes. (Include pattern, even though it doesn't affect the price.) For each test case indicate which classes it covers.

EXERCISE 3

Write a short list of the boundary values used in this program.

EXERCISE 1

Write a set of test cases in a table to exercise all the boundary values. For each test case indicate which boundary value it covers.

Test case number	Input	Expected out	Actual out	Note