CSCI 161 Exam #1 Online Problem

This portion of the exam is open book and notes (your own only, of course). You may not consult anyone other than the instructor during this portion of the exam. You MAY use any code that you have previously developed in order to complete this question.

Develop a Java program for the problem described below. You do not need to include many comments but do include your name in a comment at the top of your program file. You may submit multiple times during the exam (as many times as you want to), so when you get a version that cleanly compiles, you should probably submit it. Submit as **Exam1**. When you are satisfied with your work, or run out of time, submit your program one last time.

Description: Write a complete program that calculates the ***Distance*** a car travels in miles for varying trip durations in minutes assuming the car travels at an average speed of 55 miles per hour. Your program *must use a for loop* to vary the length of the trip from 5 to 30 minutes, inclusively, using 5-minute increments, and calculate the distance traveled in miles including $1/10^{th}$ of miles (one decimal place) for each of those trip lengths. The output your program should generate (exactly) is below in the "Output Specification". Make sure that your columns line up and that your distance amounts are formatted to one decimal place.

The ***distance*** the car travels in miles varies by the length of the trip, in ***minutes***, according to the following formula:

distance = minutes / MINUTES_IN_AN_HOUR * SPEED

Where **SPEED** is fixed at 55 miles per hour and **MINUTES_IN_AN_HOUR** is obviously 60.

Input Specification: No input is required.

Output Specification

```
Minutes Distance
5       4.6
10      9.2
15      13.8
20      18.3
25      22.9
30      27.5
```

I strongly suggest building in small increments so that you always have something that compiles. A program that is nearly complete and cleanly compiles will receive more points than a complete program that does not compile! Remember that you may submit early versions of the program as many times as you like!!