CPS 171   MP4   Winter 2002

You've just been hired as a weather statistician for the local weather television station. The station wants you to create a program that will calculate the depth of snow on the ground in the various areas of the county (designated by letters of the alphabet) each day for five days. The data comes to you in a file that contains several lines of data, one for each area of the county. The first item on each line of data is a character indicating which area the data is for. The next item on the line is the snow depth in inches at the start of the five-day period. The remaining 10 entries on the line are pairs of values for each day, representing the amount of new snow in inches for the day and the average Fahrenheit temperature for the day. A line of data might look like this, in other words:

```
A 2.5 1 33 0 27 2.8 12 7.25 23 0 42
```

In this example, the data is for the Area A of the county. At the start of the period, there was a snow depth of 2.5 inches. On the first day, there was 1 inch of new snow and the average temperature was 33 degrees; on the second day, there was no new snow (0 inches) and the average temperature was 27 degrees, and so on.

Obviously, any new snow that falls adds to the depth of snow on the ground. Additionally, though, if the average temperature is above 32 degrees Fahrenheit, the amount of snow on the ground DECREASES by 0.5 inches (half an inch) for each degree the average temperature exceeds 32 degrees. Assume that the new snow falls before any melting takes place. Note that snow depth and new snowfall figures are floating point numbers, and the average temperature is in whole degrees.

Your program is to read each line of the data file until a line containing only a sentinel of 'X' for the area of the county is read. It should produce output in tabular form that shows each area of the county, its starting snow depth, and its snow depth for each of the five days. Output for the line of data shown above could look something like this:

```
Area    Start    1      2      3      4      5
---------------------------------------------
 A      2.50   3.00   3.00   5.80  13.05   8.05
```

You do not have to copy this form for your output exactly, but your output should be neat and readable. You should format your depth figures to two decimal places, as shown above.

You are to use the input file available on the college network at **t:\class\cps\cps171\datafiles\mp4snow.dat**. Copy this file to the same subdirectory as your program.

You should turn in a printed copy of your program and of your output.