

**STA Online Computer Programming Contest (DWITE)  
January 2004**

**Problem 1**

**Clock Hands**

Calculate the angle between the hands on the face of a clock.



The input file (DATA1) will contain five lines of data. Each line will contain a time in the form HH:MM, where  $1 \leq HH \leq 12$  and  $0 \leq MM \leq 59$ . Leading zeroes are displayed for both the hours and the minutes.

The output file (OUT1) will contain five lines of data, corresponding to each line of the input file. Each line will contain A, the angle, in degrees rounded to two decimal places, between the two hands on the face of the clock.  $0 \leq A \leq 180$ .

**Sample Input (Only three lines given)**

02:00  
12:30  
06:01

**Sample Output**

60.00  
165.00  
174.50