

1- MPG

Input File: MpgIn.txt

A car's computer system displays the total miles traveled (DMT) and the average miles per gallon (MPG), since the last time the display was reset. Every 30 minutes when the car is running, the system records the miles traveled (RMT) and the gallons of fuel used (G) during the past 30 minutes, and then updates the displays.

Given the current status of the display (DMT and MPG), and the recorded distance traveled (RMT) and the gallons of fuel consumed (G) during the last 30 minutes, compute the new values of the displays: the new displayed miles traveled (NDMT) and the new average miles per gallon (NMPG) .

Note: $NDMT = DMT + RMT$ and $NMPG = NDMT / (DMT / MPG + G)$

Inputs:

There will be one line of input that contains four integers separated by a space. These values will be the displayed miles traveled (DMT), followed by the displayed miles per gallon (MPG), followed by the recorded miles traveled (RMT) and the fuel consumed (G) over the past 30 minutes.

Outputs:

There will be one line of output that contains the new displayed value of the total miles traveled (NDMT), followed by the new displayed value of the average miles per gallon (NMPG). These two computed values, NDMT and NMPG, will always be integers and they will be annotated exactly as shown below.

Sample Input

10 20 5 1

Sample Output:

15 miles 10 mpg