PROBLEM 1: INTEGER SUM

For this exercise, you must write a program that accepts two or more integers as input, then adds the integers together, and finally outputs the resulting sum.

Your program will receive input as soon as it launches. The input will consist of a series of integers, each followed by the enter key. The final input will be the word "`sum`". After receiving the "`sum`" input, your program must then output the sum of the numbers given. You may safely assume that the value of the integers you will be given will be between -2,147,483,648 and 2,147,483,647 (the minimum and maximum values of a signed 32-bit integer). You may also safely assume that no separators (such as commas) will be used. If your program is given input that is not a valid integer or the word "`sum`", it must immediately output the message, "Invalid input." and exit.

*Your program's output must match the examples given below **exactly**. Your program must not prompt for input. Note carefully the spelling, capitalization, punctuation, and spacing of the output. The input that will be given to your program is highlighted in **red**.*

EXAMPLE RUN 1

```
123
456
sum
579
```

EXAMPLE RUN 2

```
123
456
789
sum
1368
```

EXAMPLE RUN 3

```
123
456
789
go
Invalid input.
```