STOP THE CLOCK!

I saw this sign outside a shop. Can you make up a mathematics problem based on this?

Here is mine:

Suppose that the shop opens at 6 pm and closes at 1 am, and that any diner arriving after n o'clock, and before the next hour, pays £n.

Last evening, the number of diners arriving within each hour, from 6pm-7pm up to 12am-1am, increased steadily (i.e., by exactly the same amount each hour). When closing up, the owner calculated that the mean cost of a meal was £9.96.

How many diners ate there last night? Can you find more than one possible answer?

The solution can be found on the *SYMmetry*plus page on the MA website:

http://www.m-a.org.uk/symmetry-plus

What other problems can you invent using this idea?

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