



Problem of the Week

Problem B

Saphyr Goes to a Concert

Saphyr and her friends are going to their local concert hall to see their favourite singer, Tinker Leisurely.

The rectangular hall is to be set up so that people sit in rows of chairs facing the stage.

Each row will have the same number of seats, with each row having at most 50 seats. The hall has a capacity for at most 115 rows. Saphyr has discovered that there are to be 4032 seats for the audience.



- (a) Using what you know about the area of a rectangle and about the whole numbers that divide evenly into 4032, determine the possible configurations of seats in the hall.
- (b) If the stage is 36 m wide and the chairs are to be spaced 1 m apart (from centre to centre), which of your answers in part (a) do you think gives the most reasonable dimensions for the seating? Why?