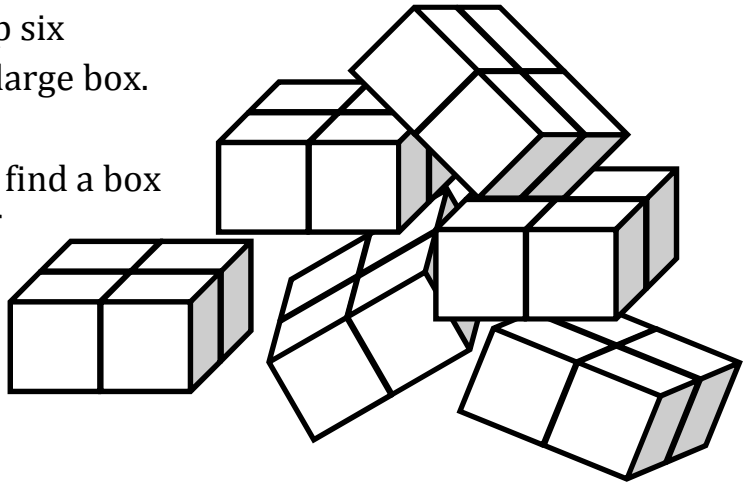


# A Packing Problem

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A shipping company needs to box up six  $1\text{ft.} \times 2\text{ft.} \times 2\text{ft.}$  packages into one large box. To save money on materials, the shipping company would like to find a box that would have the least amount of surface area.



1. What are some possible size boxes that could be used to pack all six packages together?

A grid of 14 columns and 14 rows of dots, intended for drawing possible box configurations.

2. If the postal company wants to use a box with the least surface area, what should the dimensions be?
3. What if you add three more smaller  $1 \times 1 \times 1$  packages? Can you find the dimensions of the box with the least surface area?