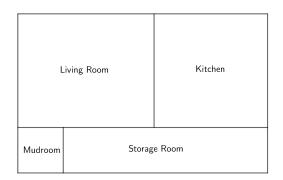
## Problem of the Week Problem C Dollhouse

The first level of a dollhouse is in the shape of a rectangle. Its floor plan is shown in the following diagram.



Both the mudroom and the kitchen are square with areas of  $400 \text{ cm}^2$  and  $2500 \text{ cm}^2$ , respectively. The living room is rectangular with an area of  $3000 \text{ cm}^2$ . Determine the area of the rectangular storage room.