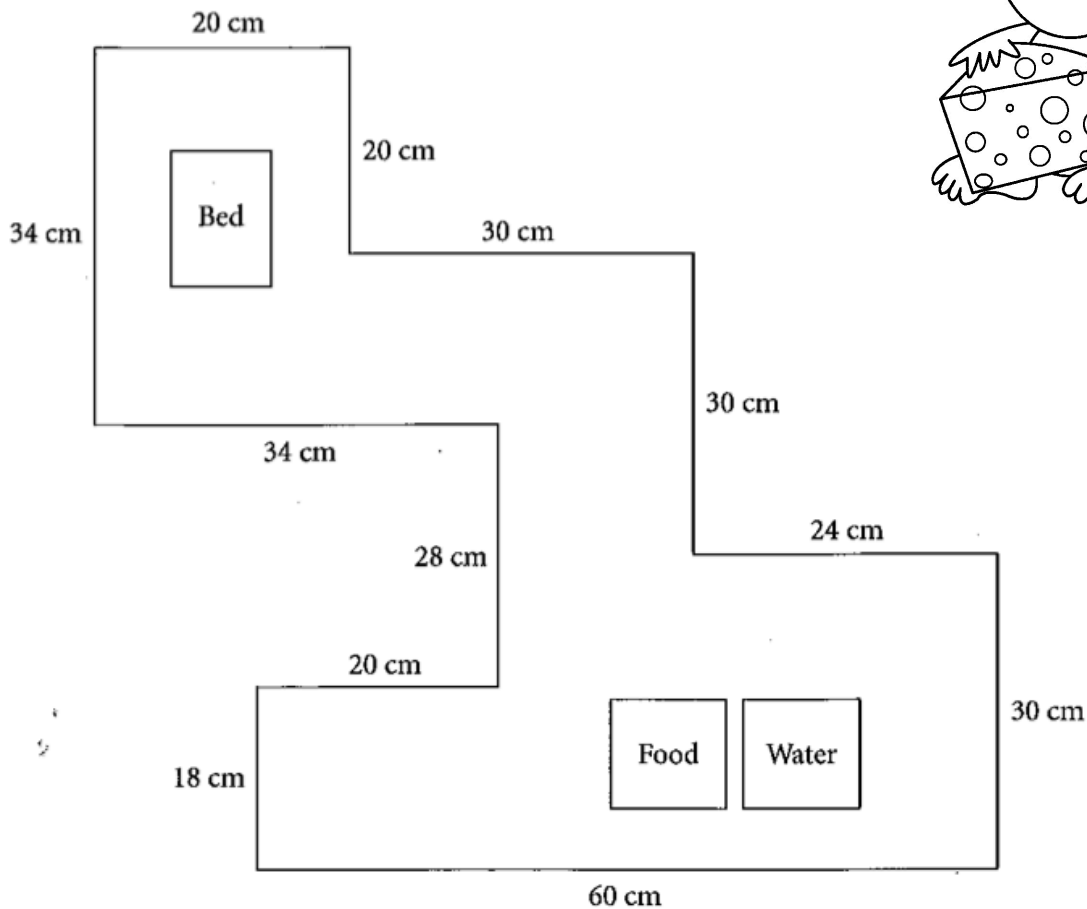




Mouse House

Please show **all** working.

The floor plan of a mouse house is shown below. Imagine that you have bought a pet mouse to live in this house.



Questions

1. Calculate the available floor space that your mouse has to live in (in your calculations include the space taken for food, water and their bed).
2. For exercise, your mouse runs along the inside of the walls of the house. In one complete trip around the house, how far does your mouse run?
3. The walls of the house are 18 cm high. If you were to paint all the walls (the internal walls only), what area would you need to cover?
4. Where would you place one straight barrier so that your mouse runs as close to a distance of 250 cm as possible in one full continuous trip along the walls?
In your answer redraw the mouse house on your page. Clearly mark the straight barrier that you have placed in the house. In your diagram include all wall and barrier lengths used in your calculations.