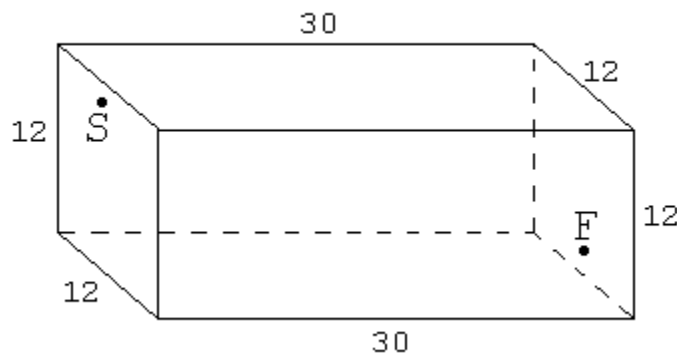


The Spider and the Fly

Part 1:

There is a rectangular room whose dimensions are 30' long by 12' wide by 12' high. A spider is located on one of the 12'x12' end walls 1' down from the ceiling and 6' from each side wall. A fly is located on the opposite 12'x12' wall 1' up from the floor and 6' from each side wall.

The spider desires to dine on the fly which is asleep. Determine the shortest route that the spider may follow to get to the fly (the spider must always be touching one of the 4 walls, the ceiling, or the floor). The shortest route is defined to be the least number of feet from S to F.



Part 2:

Another spider desires to dine on another fly. The spider begins at point A and must travel along the paths of her web to get to the fly at point B. To work up an appetite for dinner, the spider decides to challenge herself by turning either **left** or **right** at every intersection including the ones encountered right at the start and finish (points A and B), never going straight across. Still, she is eager to get to Mr. Fly, so she determines to take the shortest route. Can you help her find the shortest route to dinner? The shortest route is determined by the least number of turns made to get from A to B.

