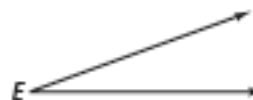


3-6 Puzzle: House Construction

Constructing Parallel and Perpendicular Lines

You are a builder about to build a home. Instead of giving you a drawing, the architect gives you the segments and angle at the right and the descriptions below. Using only a compass and straightedge, follow the architect's directions to make a two-dimensional construction of the house. Show all of the arcs and lines you use for each construction.

1. The width of the house is $2AB + CD$.
2. The walls are perpendicular to the base and have a height of AB .
3. The measure of the angle from the horizontal ceiling on top of the walls to the roof is $\frac{3}{2}m\angle E$.
4. The door is in the middle of the house and has a width of CD and a height of $\frac{3}{2}AB$.
5. The tops of the windows are level with the top of the door. There are windows centered between the door and each side of the house. The windows are square with sides measuring $\frac{1}{2}AB$.



DRAW THE PICTURE OF THE HOUSE IN THE SPACE BELOW