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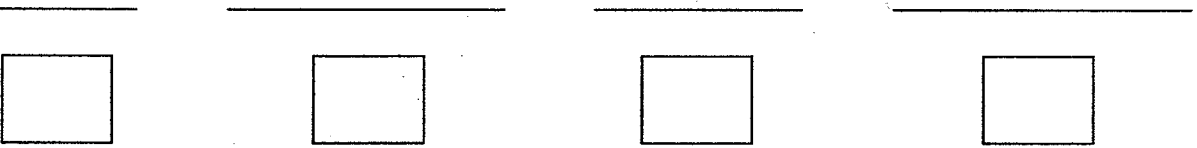
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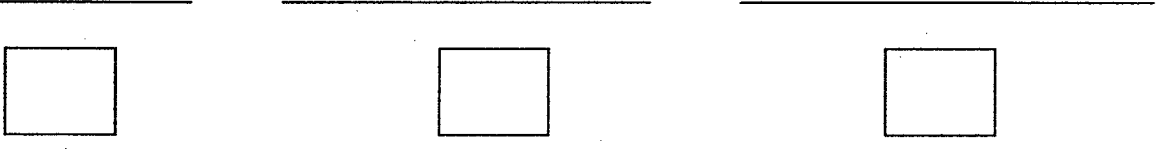
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# Amateur Architect - Ruler Skills 1


## Measuring Line Segments


Measure each line segment to the nearest  $\frac{1}{16}$ " and write the length in the box under the segment. Use mixed numbers when appropriate and write each number in simplest form.

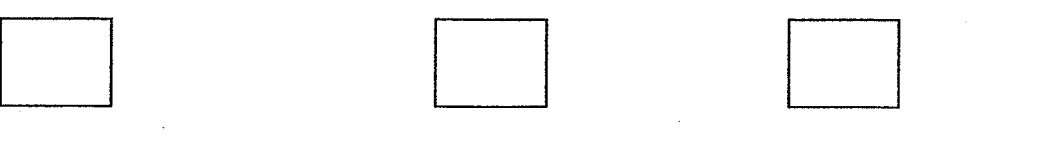
1. 

2. 

3. 

4. 

5. 

6. 





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# Amateur Architect - Ruler Skills 2

## Drawing Line Segments

Place a point at the beginning of each line segment. Then measure the given distance from the starting point and place an endpoint. Finally, shade in the segment between the two points.

1)  $4 \frac{5}{16}$ " \_\_\_\_\_

2)  $1 \frac{7}{16}$ " \_\_\_\_\_

3)  $5 \frac{3}{16}$ " \_\_\_\_\_

4)  $2 \frac{1}{8}$ " \_\_\_\_\_

5)  $3 \frac{3}{4}$ " \_\_\_\_\_

6)  $5 \frac{1}{16}$ " \_\_\_\_\_

7)  $4 \frac{1}{2}$ " \_\_\_\_\_

8)  $3 \frac{5}{8}$ " \_\_\_\_\_

9)  $\frac{15}{16}$ " \_\_\_\_\_





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# Amateur Architect - Ruler Skills 3

## Centering Exercises

### Centering Segments:

Center a one inch segment on each of the segments below. First, locate the center of each segment. Then make a mark  $\frac{1}{2}$ " on each side of the center. Finally, connect the two endpoints to create a centered line segment.

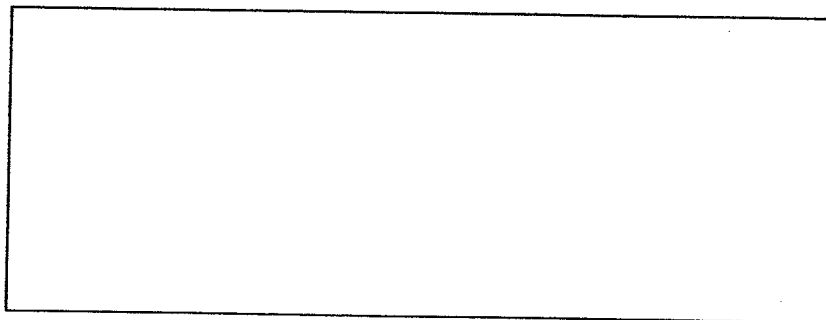
1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

### Centering Objects:

Make a door that is centered above the point  $\frac{3}{4}$ " from the left side of the rectangle. The door is to be  $\frac{1}{2}$ " across by  $1 \frac{1}{4}$ " high. Next, center a window 2" across by  $\frac{14}{16}$ " high in the area to the right of the door. The top of the window is to be the same height as the top of the door. Begin by finding the measure of the distance from the right side of the door to the right side of the rectangle. Mark the center of this distance. Then make a mark one inch on either side of the centering mark. This is the distance across the window. Make similar markings at the top of the rectangle to serve as guide points. Finally, draw the window.





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# Amateur Architect

Use the following directions to construct your street, curb, house, and garage.  
(NOTE: All dimensions are given as length by width (l x w). Length is measured from left to right. Width is measured from top to bottom.) Use a clean, white sheet of paper turned to landscape mode.

## **I. Street and Curb**

1. The street is 11" x 1 1/2" and is located at the very bottom of the page.
2. a) A broken median line runs the length of the street. Each median segment is 1" x 1/8" and segments are spaced 1" apart.  
b) Center these segments between the street line and the bottom edge of the paper.  
c) The first median segment begins 1" from the left edge of the paper.
3. The curb line rises 1/4" above the street line and is parallel to the street line.

## **II. House**

1. The left side of the house is 1/2" from the left edge of the paper.
2. The length of the front wall of the house is 9/16 of the length of the paper.
3. The width of the front wall of the house is 2 15/16" less than the length of the house.
4. The distance between the top of the house's front wall and the top of the roof is ten times the width of one broken median segment in the street.
5. The roof angles in at 40° from each top corner of the house. The top of the roof is parallel to the top of the front wall.

## **III. Garage**

1. The distance between the right side of the house and the left side of the garage is 36/48".
2. The length of the garage is 1 7/8" more than the distance from the top of the house wall to the top of the house roof.
3. The width of the garage is 3 7/16" less than the length of the house.
4. The garage roof angles in at 35° from each top corner of the garage and meets at a point.





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# Amateur Architect

## IV. House Door

1. The left side of the door begins at a point located  $\frac{1}{3}$  of the way from the left wall of the house to the right wall of the house
2. The width of the door is  $\frac{5}{4}$ " less than the width of the front wall of the house.
3. The length of the door is 1".

## V. House Windows

1. The window to the left of the door is  $1 \frac{1}{4}$ " square. Draw the window  $\frac{1}{2}$ " above the top of the curb, centered between the door and the wall.
2. The window to the right of the door is rectangular and its dimensions are  $2 \frac{1}{4}$ " x  $1 \frac{1}{4}$ ". Draw the window  $\frac{1}{2}$ " above the top of the curb, centered between the door and the wall.
3. Draw a small doorknob on the front door. No measurement necessary!

## VI. Garage Door

1. The garage door is  $2 \frac{5}{8}$ " in length and is centered.
2. The distance from the top of the garage door to the top of the garage wall is the same as the distance from the side of the garage door to the side of the garage wall.
3. Divide the garage door into 5 equal horizontal panels that span the length of the garage door.
4. Center a rectangular garage door handle,  $\frac{3}{8}$ " x  $\frac{1}{8}$ ", on the bottom panel.

## VII. Label, Title, and Theme

1. Label the dimensions of a median segment and the street width.
2. Label the dimensions of the house, its roof, windows, and door.
3. Label the dimensions of the garage, its roof, door, and handle.
4. Give your constructed house a title and a theme. (Be creative!)
5. Color your house and the surrounding area according to your theme.





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# Amateur Architect - Fraction Calculations

The calculation numbers below correspond to the numbers on the Amateur Architect project. Show all of your work and then place the answer for each calculation in the answer box. Problems without answer boxes can be solved in more than one way. All fractions should be reduced to simplest form.

I-2 Centering Median Segments	II-2 Length of the Front Wall	II-3 Width of the Front Wall
II-4 Distance Between Top of Wall and Top of Roof	III-2 Length of the Garage	III-3 Width of the Garage
IV-1 Location of Door	IV-2 Width of House Door	V-1 Center Left Window
V-2 Center Right Window	VI-1 Center Garage Door	VI-3 Five Equal Garage Door Panels

