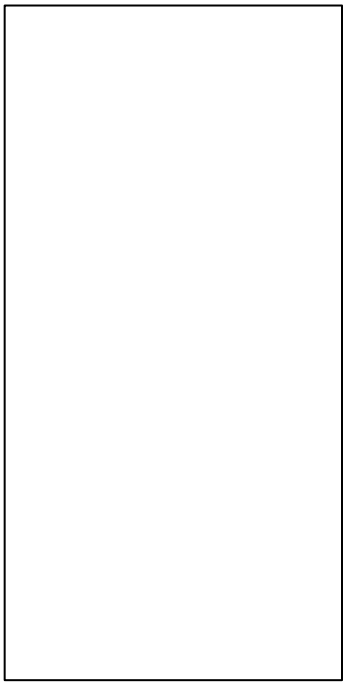
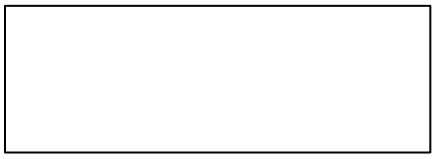
Name _____ Date _____

1. Measure each rectangle with your inch ruler, and label the dimensions. Use the area model to find the area.

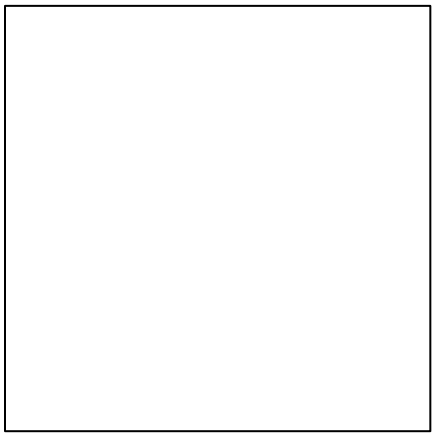
a.



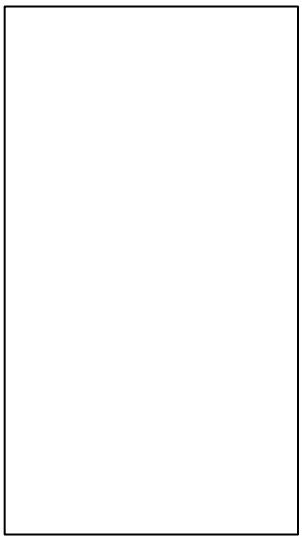
b.



c.



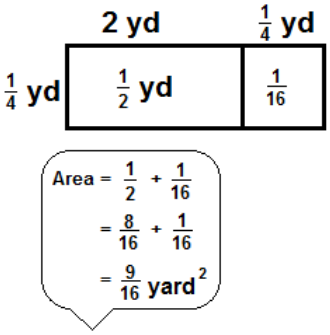
d.



e.

2. Find the area of rectangles with the following dimensions. Explain your thinking using the area model.

   a. $2\frac{1}{4}$ yd × $\frac{1}{4}$ yd

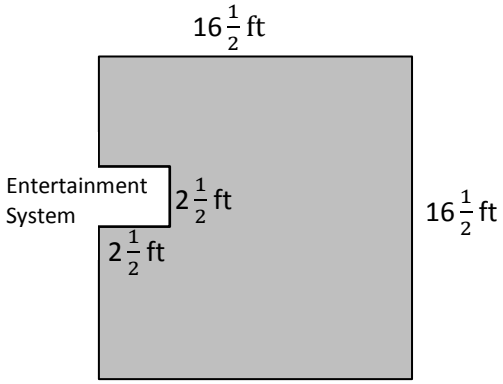


   b. $2\frac{1}{2}$ ft × $1\frac{1}{4}$ ft

3. Kelly buys a tarp to cover the area under her tent. The tent is 4 feet wide and has an area of 31 square feet. The tarp she bought is $5\frac{1}{3}$ feet by $5\frac{3}{4}$ feet. Can the tarp cover the area under Kelly's tent? Draw a model to show your thinking.

4. Shannon and Leslie want to carpet a $16\frac{1}{2}$ ft by $16\frac{1}{2}$ ft square room. They can't put carpet under an entertainment system that juts out. (See the drawing below.)

   a. In square feet, what is the area of the space with no carpet?



   b. How many square feet of carpet will Shannon and Leslie need to buy?

Name _____ Date _____

1. Find the area of the following rectangles. Draw an area model if it helps you.

a. $\frac{8}{3}$ cm × $\frac{24}{4}$ cm

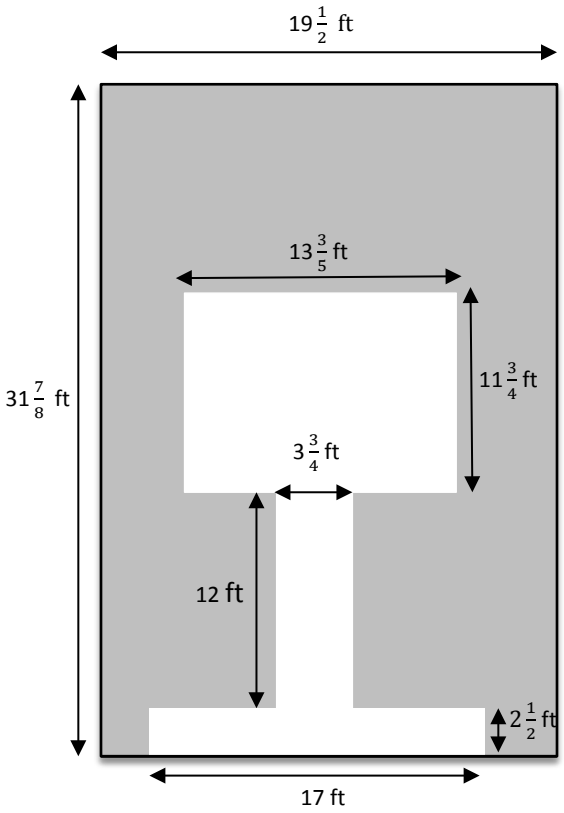
b. $\frac{32}{5}$ ft × $3\frac{3}{8}$ ft

c. $5\frac{4}{6}$ in × $4\frac{3}{5}$ in

d. $\frac{5}{7}$ m × $6\frac{3}{5}$ m

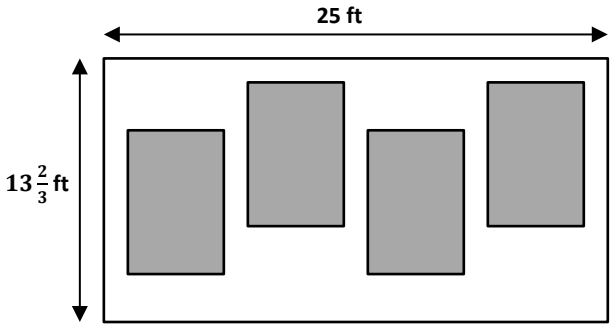
2. Chris is making a table top from some leftover tiles. He has 9 tiles that measure $3\frac{1}{8}$ inches long and $2\frac{3}{4}$ inches wide. What is the area he can cover with these tiles?

3. A hotel is recarpeting a section of the lobby. Carpet covers the part of the floor as shown below in gray. How many square feet of carpeting will be needed?



Name _____ Date _____

1. Mr. Albano wants to paint menus on the wall of his café in chalkboard paint. The gray area below shows where the rectangular menus will be. Each menu will measure 6 ft wide and $7\frac{1}{2}$ ft tall.



$6 \times 7\frac{1}{2}$
$(6 \times 7) + (6 \times \frac{1}{2})$
$42 + 3 = 45 ft^2$

- How many square feet of menu space will Mr. Albano have?

$45 ft^2 \times 4 \text{ menus} = 45 \times 4 = 180 ft^2$

The square feet of menu space is 180 ft^2.

$A = 25 \times 13\frac{2}{3}$
$= (25 \times 13) + (25 \times \frac{2}{3})$
$= 325 + 16\frac{2}{3}$
$= 341\frac{2}{3} ft^2$

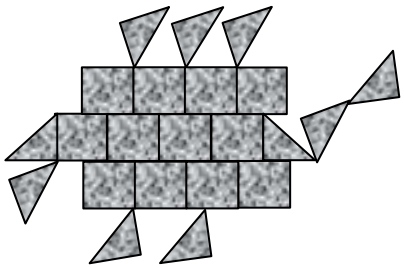
- What is the area of wall space that is not covered by chalkboard paint?

$341\frac{2}{3} ft^2 - 180 ft^2 = 161\frac{3}{3} ft^2$

$341 - 180 = 161$

The area of wall space not covered is $161\frac{2}{3}$ ft^2.

2. Mr. Albano wants to put tiles in the shape of a dinosaur at the front entrance. He will need to cut some tiles in half to make the figure. If each square tile is $4\frac{1}{4}$ inches on each side, what is the total area of the dinosaur?



3. A-Plus Glass is making windows for a new house that is being built. The box shows the list of sizes they must make.

15 windows $4\frac{3}{4}$ ft long and $3\frac{3}{5}$ ft wide
7 windows $2\frac{4}{5}$ ft wide and $6\frac{1}{2}$ ft long

How many square feet of glass will they need?

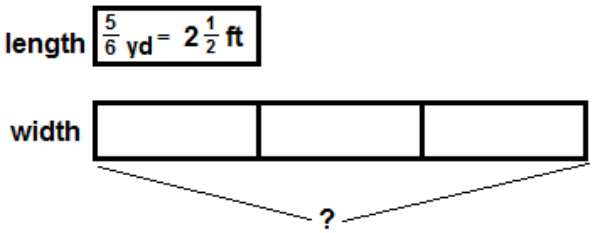
4. Mr. Johnson needs to buy seed for his backyard lawn.

   - If the lawn measures $40\frac{4}{5}$ ft by $50\frac{7}{8}$ ft, how many square feet of seed will he need?

   - One bag of seed will cover 500 square feet if he sets his seed spreader to its lowest setting and 300 square feet if he sets the spreader to its highest setting. How many bags of seed will he need if he uses the highest setting? The lowest setting?

Name _____ Date _____

1. The width of a picnic table is 3 times its length. If the length is $\frac{5}{6}$ yd long, what is the area in square feet?



width = $2\frac{1}{2}$ ft × 3

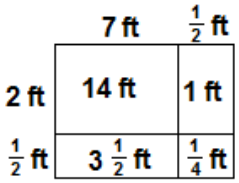
= $\frac{5}{2}$ ft × 3

= $\frac{15}{2}$ ft = $7\frac{1}{2}$ ft

Area = length × width

= $2\frac{1}{2}$ ft × $7\frac{1}{2}$ ft

= $18\frac{3}{4}$ ft^2



14 ft + 1 ft + $3\frac{1}{2}$ ft + $\frac{1}{4}$ ft = $18\frac{3}{4}$ ft^2

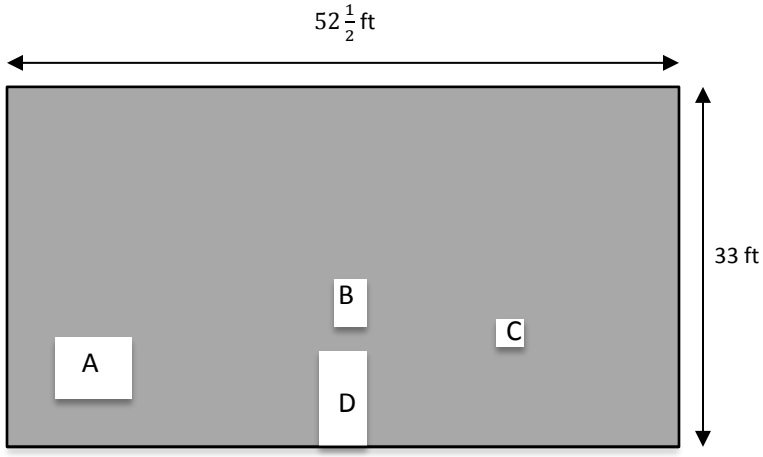
2. A painting company will paint this wall. The homeowner gives them the following dimensions:

Window A is $6\frac{1}{4}$ ft × $5\frac{3}{4}$ ft.

Window B is $3\frac{1}{8}$ ft × 4 ft.

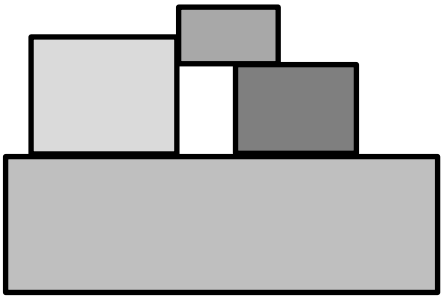
Window C is $9\frac{1}{2}$ ft^2.

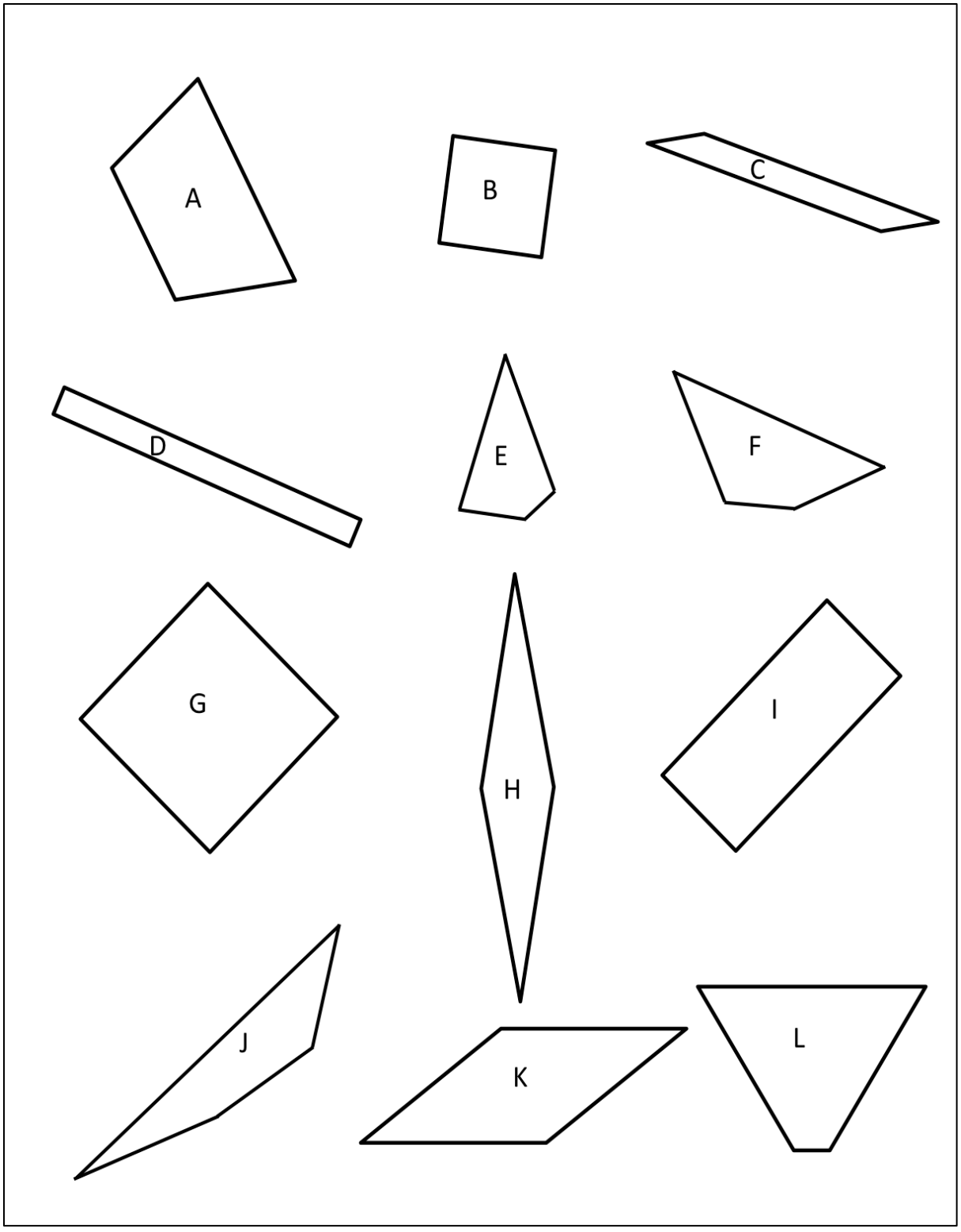
Door D is 8 ft × 4 ft.



What is the area of the painted part of the wall?

3. A decorative wooden piece is made up of four rectangles as shown to the right. The smallest rectangle measures $4\frac{1}{2}$ inches by $7\frac{3}{4}$ inches. If $2\frac{1}{4}$ inches are added to each dimension as the rectangles get larger, what is the total area of the entire piece?





shape sheet