5th Grade-Lesson 14/Mrs. Faour

Objective: Solve real-world problems involving area of figures with fractional side lengths using visual models and/or equations.

Problem –Set page/Watch Video

Fluency Practice /Watch Video

Application Problem/Watch Video

Lesson Requirements:

* Homework page/Submit
* Exit Ticket page/Submit

Name Date

1. George decided to paint a wall with two windows. Both windows are $3\frac{1}{2}$-ft by $4\frac{1}{2}$-ft rectangles. Find the area the paint needs to cover.

**8 ft**

$12\frac{7}{8}$ **ft**

1. Joe uses square tiles, some of which he cuts in half, to make the figure below. If each square tile has a side length of $2\frac{1}{2}$ inches, what is the total area of the figure?



1. All-In-One Carpets is installing carpeting in three rooms. How many square feet of carpet are needed to carpet all three rooms?
2. Mr. Johnson needs to buy sod for his front lawn.
3. If the lawn measures $36\frac{2}{3}$ ft by $45\frac{1}{6}$ ft, how many square feet of sod will he need?
4. If sod is only sold in whole square feet, how much will Mr. Johnson have to pay?

**Sod Prices**

|  |  |
| --- | --- |
| **Area** | **Price per Square Foot** |
| First 1,000 sq ft | $0.27 |
| Next 500 sq ft | $0.22 |
| Additional square feet | $0.19 |

1. Jennifer’s class decides to make a quilt. Each of the 24 students will make a quilt square that is 8 inches on each side. When they sew the quilt together, every edge of each quilt square will lose $\frac{3}{4}$ of an inch.
2. Draw one way the squares could be arranged to make a rectangular quilt. Then, find the perimeter of your arrangement.
3. Find the area of the quilt.

Name Date

Mr. Klimek made his wife a rectangular vegetable garden. The width is $5\frac{3}{4}$ ft, and the length is $9\frac{4}{5}$ ft. What is the area of the garden?

Name Date

**25 ft**

$13\frac{2}{3} $**ft**

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.
	* How many square feet of menu space will Mr. Albano have?
	* What is the area of wall space that is not covered by chalkboard paint?
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?

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