Homework

This week we will finish Chapter 16, *Convert Units of Measure*. We will complete Chapter 13, *Perimeter and Area with Decimals and Fractional Lengths.* The test will be on Monday February 6.

Reminders

Please remember that homework is just a reinforcement of what we do in class. When a scholar completes homework, they are retaining the information. A scholar who does not complete the homework is more likely to forget what was learned in class.

Notes

Scholars should use a separate sheet of paper if they need additional space. **Points will be lost for late work and for failure to show work**. Late homework will only be accepted up to Friday of the week that it was due. Please feel free to contact me with any questions or concerns at natalie.roman@archimedean.org.

Extra Practice

Additional practice for the daily lesson is available on Archie. To access the worksheets, please have your child login into Archie. Click on Resources, select courses, then My Courses. From there, you will see a drop down menu of each class. Go to American Math and click on Resources. There you will see worksheets for each section in the chapter.

☐	Monday	January 30	Page 561 (attached)
☐	Tuesday	January 31	Page 567 (attached)
☐	Wednesday	February 1	Reteach 13.1 and 13.2
☐	Thursday	February 2	Reteach 13.3
☐	Friday	February 3	None- **Complete Review Ch. 13 and Ch. 16 in Archie Resources**

Solve Multi-step Metric Measurement Problems

Go Online

Interactive Examples

Convert.

1. 16 m = ___16,000___ mm

   number of meters   millimeters in 1 meter   number of millimeters

   16   ×   1,000   =   16,000

   16 m = 16,000 mm

2. 6,500 cL = _____ L

3. 15 cm = _____ mm

4. 3,200 L = _____ kL

5. 12 L = _____ mL

6. 200 cm = _____ m

7. 70,000 m = _____ km

8. 100 dL = _____ L

9. 60 m = _____ mm

Compare. Write <, >, or =.

10. 900 cm ◯ 9,000 mm

11. 600 km ◯ 5 m

12. 5,000 cm ◯ 5 m

13. 18,000 L ◯ 10 kL

14. 8,456 mL ◯ 9 L

15. 2 m ◯ 275 cm

Problem Solving Real World

16. Bria ordered 145 centimeters of fabric. Jayleen ordered 1.5 meters of fabric. Who ordered more fabric?

    _____

17. Ed fills his sports bottle with 1.2 liters of water. After his bike ride, he drinks 200 milliliters of the water. How much water is left in Ed's sports bottle?

    _____

Solve Multi-step Measurement Problems

Solve each problem by making a table.

1. Terrance is making soup. His soup pot holds 8 quarts of soup. How many 1-cup servings of soup will Terrance make?

Number of quarts	1	2	3	4	8
Number of cups	4	8	12	16	32

_____
            32 1-cup servings

2. Rian has a water bottle that holds 2.5 liters of water. What is the volume of the water bottle in milliliters?

_____

3. Alex lives 500 yards from the park. How many inches does Alex live from the park?

_____

4. The art display case is 3,500 centimeters long. How many meters long is the display case?

_____

5. **WRITE** ▶ *Math* Explain how you could use a conversion table to convert 700 centimeters to meters.

_____

_____

Find Perimeter and Area of Rectangles with Decimal Side Lengths

Use the strategy to *solve a simpler problem*.

Alexandra is going to paint a wall in her bedroom. The wall is 15.5 feet long and 8 feet high. A window measures 6 feet wide and 4.5 feet high. How many square feet of the wall will Alexandra paint?

| Read the Problem	Solve the Problem
What do I need to find? I need to find how many __square feet of__ __the wall__ Alexandra will paint.	First, find the area of the wall. $A = l \times w$ $\quad = 15.5 \times 8$ $\quad = 124$ square feet
What information am I given? The paint will cover the wall. The paint will not cover the __window__. The length of the wall is 15.5 feet and the height is __8 feet__. The width of the window is 6 feet and the height is __4.5 feet__.	Next, find the area of the window. $A = l \times w$ $\quad = 4.5 \times 6$ $\quad = 27$ square feet Last, subtract the area of the window from the area of the wall. $\quad 124$ $\underline{-27}$ $\quad\ 97$ square feet So, Alexandra will paint __97 square feet__ of her bedroom wall.
What is my plan or strategy? I can solve simpler problems. Find the area of the __wall__. Then, find the area of the window. Last, __subtract__ the area of the __window__ from the area of the wall.	

1 In the problem above, the window and the wall in Alexandra's room are both rectangular. How much greater is the perimeter of the wall than the perimeter of the window?

_____

58

Name _____

Find Perimeter and Area of Rectangles with Fractional Side Lengths

Label all sides of a rectangle to find the perimeter.

A rectangular flower bed is $8\frac{3}{8}$ feet long and $5\frac{1}{4}$ wide. How many feet of fencing are needed to go around the perimeter of the flower bed?

A. Draw a rectangle. Label all of the sides.

$8\frac{3}{8}$ ft

$5\frac{1}{4}$ ft | flower bed | $5\frac{1}{4}$ ft

$8\frac{3}{8}$ ft
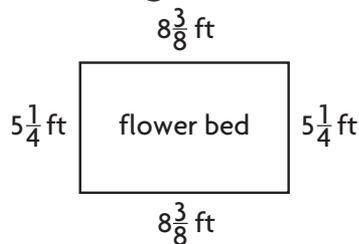
B. Use the formula $P = l + w + l + w$.

> Perimeter is the distance around the rectangle, so add all the side lengths.

$$P = 8\frac{3}{8} + 5\frac{1}{4} + 8\frac{3}{8} + 5\frac{1}{4} = 27\frac{1}{4} \text{ feet}$$

The perimeter is __$27\frac{1}{4}$__ feet, so __$27\frac{1}{4}$__ feet of fencing is needed.

Use a formula to find the perimeter.

1

$3\frac{1}{8}$ in.

$3\frac{1}{8}$ in. | | $3\frac{1}{8}$ in.

$3\frac{1}{8}$ in.
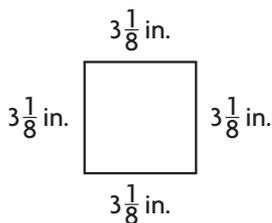
$P = $ __$3\frac{1}{8}$__ $+$ __$3\frac{1}{8}$__ $+$ _____ $+$ _____

Perimeter = _____

2

$12\frac{4}{7}$ m

9 m | | 9 m

$12\frac{4}{7}$ m

$A = $ _____ $\times$ _____
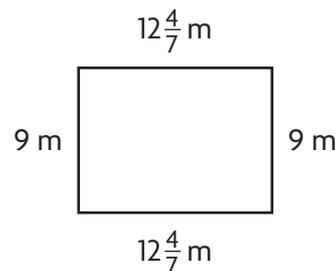
Area = _____

Solve.

3 Ms. Chen wants to put border paper around a rectangular bulletin board that is 6 feet long and $4\frac{1}{2}$ feet wide. How many feet of border paper should she buy?

_____

Explore Area and Mixed Numbers

You can use an area model to help you multiply mixed numbers.

Find the area. $1\frac{4}{5} \times 2\frac{1}{3}$

Step 1 Rewrite each mixed-number factor as the sum of a whole number and a fraction.

$$1\frac{4}{5} = 1 + \frac{4}{5} \text{ and } 2\frac{1}{3} = 2 + \frac{1}{3}$$

Step 2 Draw an area model to show the original multiplication problem.
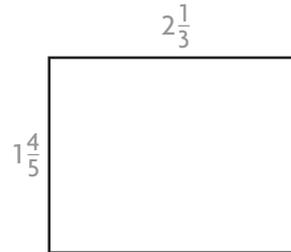
Step 3 Draw dashed lines, and label each section to show how you broke apart the mixed numbers in Step 1.
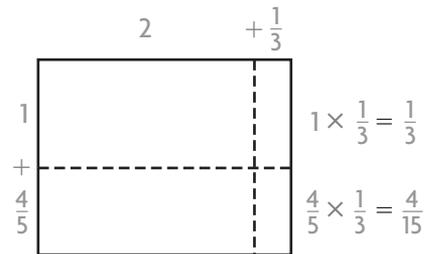
Step 4 Find the area of each section.

$1 \times 2 = \underline{\quad 2 \quad}$

$1 \times \frac{1}{3} = \underline{\quad \frac{1}{3} \quad}$

$\frac{4}{5} \times 2 = \underline{\quad \frac{8}{5} \quad}$

$\frac{4}{5} \times \frac{1}{3} = \underline{\quad \frac{4}{15} \quad}$

Step 5 Add the areas of each of the sections to find the total area of the rectangle.

$$2 + \frac{1}{3} + \frac{8}{5} + \frac{4}{15} = \frac{\boxed{30}}{15} + \frac{\boxed{5}}{15} + \frac{\boxed{24}}{15} + \frac{4}{15}$$

$$= \frac{\boxed{63}}{15}, \text{ or } \underline{\quad 4\frac{1}{5} \quad}$$

So, $1\frac{4}{5} \times 2\frac{1}{3}$ is $\underline{\quad 4\frac{1}{5} \quad}$.

The area model shows a rectangle labeled $2\frac{1}{3}$ across the top and $1\frac{4}{5}$ along the side. A second model is divided into sections labeled 2 and $+\frac{1}{3}$ across the top and 1, $+$, $\frac{4}{5}$ along the side, with $1 \times \frac{1}{3} = \frac{1}{3}$ and $\frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$.

Use an area model to solve.

1 $1\frac{2}{3} \times 2\frac{1}{4}$

2 $1\frac{3}{4} \times 2\frac{3}{5}$

3 $2\frac{1}{2} \times 1\frac{1}{3}$