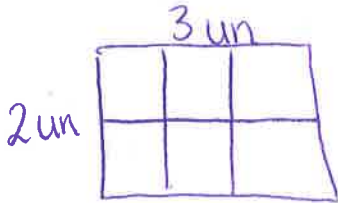


Name Key

Date 4-2-19

Sketch the rectangles and your tiling. Write the dimensions and the units you counted in the blanks. Then, use multiplication to confirm the area. Show your work. We will do Rectangles A and B together.

1. Rectangle A:

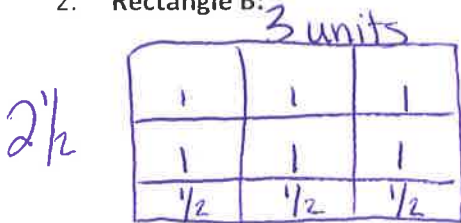


Rectangle A is

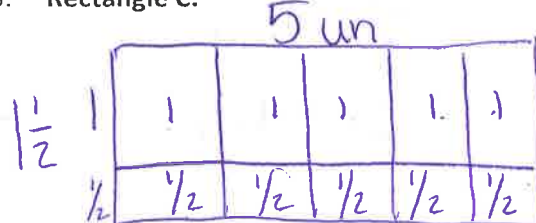
3 units long 2 units wide

Area = 6 units<sup>2</sup>

2. Rectangle B:



3. Rectangle C:



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

$$\begin{array}{r} 5 \times 1 = 5 \\ 5 \times \frac{1}{2} = 2\frac{1}{2} \\ \hline 7\frac{1}{2} \end{array}$$

Rectangle B is

3 units long 2 1/2 units wide

Area = 7 1/2 units<sup>2</sup>

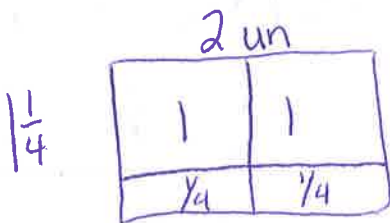
$$\begin{array}{r} 3 \times 2\frac{1}{2} \\ 3 \times 2 = 6 \\ + 3 \times \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2} \\ \hline 7\frac{1}{2} \end{array}$$

Rectangle C is

5 units long 1 1/2 units wide

Area = 7 1/2 units<sup>2</sup>

4. Rectangle D:



5. Rectangle E:



Rectangle D is

2 units long 1 1/4 units wide

Area = 2 1/2 units<sup>2</sup>

$$\begin{array}{r} 2 \times 1\frac{1}{4} \\ 2 \times 1 = 2 \\ 2 \times \frac{1}{4} = \frac{2}{4} = \frac{1}{2} \\ \hline 2\frac{1}{2} \end{array}$$

Rectangle E is

5 units long 3/4 units wide

Area = 3 3/4 units<sup>2</sup>

$$5 \times \frac{3}{4} = \frac{15}{4} = 3\frac{3}{4}$$

$$\begin{array}{r} 4 \overline{)15} \\ \underline{12} \\ 3 \end{array}$$

6. The rectangle to the right is composed of squares that measure  $2\frac{1}{4}$  inches on each side. What is its area in square inches? Explain your thinking using pictures and numbers.



$$A = l \times w$$

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

$$9 \times 6\frac{3}{4}$$

$$(9 \times 6) + (9 \times \frac{3}{4})$$

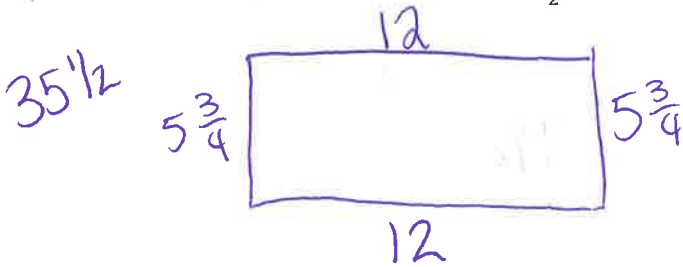
$$54 + \frac{27}{4}$$

$$54 + 6\frac{3}{4} = 60\frac{3}{4}$$

$$4 \overline{) 27} \\ \underline{24} \\ 3$$

$$60\frac{3}{4} \text{ in}^2$$

7. A rectangle has a perimeter of  $35\frac{1}{2}$  feet. If the length is 12 feet, what is the area of the rectangle?



$$35\frac{1}{2} - 24 = 11\frac{1}{2}$$

$$11\frac{1}{2} \div 2 =$$

$$\frac{23}{2} \div 2 = \frac{23}{2} \times \frac{1}{2} = \frac{23}{4}$$

$$4 \overline{) 23} \\ \underline{20} \\ 3$$

$$5\frac{3}{4}$$

$$A = l \times w$$

$$A = 12 \times 5\frac{3}{4}$$

$$(12 \times 5) + (12 \times \frac{3}{4})$$

$$60 + \frac{36}{4}$$

$$60 + 9$$

$$69 \text{ in}^2$$

## m5:L10 - Area of rectangles

$$2 \times 2 = 4$$

$$2 \times 0.2 = 0.4$$

$$0.2 \times 0.2 = 0.04$$

$$0.02 \times 0.2 = 0.004$$

$$3 \times 4 = 12$$

$$3 \times 0.4 = 1.2$$

$$0.3 \times 0.4 = 0.12$$

$$0.03 \times 0.4 = 0.012$$

$$5 \times 7 = 35$$

$$0.5 \times 7 = 3.5$$

$$0.5 \times 0.7 = 0.35$$

$$0.5 \times 0.07 = 0.035$$

---

$$1 = \frac{4}{4} \quad 2 = \frac{8}{4} \quad 2\frac{1}{4} = \frac{9}{4} \quad 2\frac{3}{4} = \frac{11}{4} \quad 2\frac{1}{2} = \frac{5}{2}$$

$$4\frac{2}{3} = \frac{14}{3} \quad 3\frac{3}{4} = \frac{15}{4}$$

---

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

$$\frac{7}{2} \times \frac{7}{3} = \frac{49}{6} = 8\frac{1}{6}$$

$$\begin{array}{r} 8 \\ 6 \overline{)49} \\ \underline{-48} \\ 1 \end{array} \quad 8\frac{1}{6}$$

---

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

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

$$\frac{10}{3} \times \frac{11}{4} = \frac{110}{12} = 9\frac{1}{6}$$

$$\frac{19}{5} \times \frac{14}{3} = \frac{266}{15}$$

$$\begin{array}{r} 17\frac{11}{15} \\ 15 \overline{)266} \\ \underline{15} \\ 116 \\ \underline{105} \\ 11 \end{array}$$

$$17\frac{11}{15}$$

me. 110 - Area of rectangles

$$\begin{array}{l}
 5 \times 8 = 40 \\
 3 \times 0.4 = 1.2 \\
 0.3 \times 0.4 = 0.12 \\
 0.03 \times 0.4 = 0.012
 \end{array}
 \qquad
 \begin{array}{l}
 4 = 8 \times 0.5 \\
 4.0 = 8.0 \times 0.5 \\
 40.0 = 8.0 \times 5.0 \\
 400.0 = 8.0 \times 50.0
 \end{array}$$

$$\begin{array}{l}
 28 = 7 \times 4 \\
 2.8 = 7 \times 0.4 \\
 28.0 = 7.0 \times 4.0 \\
 280.0 = 70.0 \times 4.0
 \end{array}$$

$$\frac{1}{\frac{1}{2}} = 2 \quad \frac{1}{\frac{1}{3}} = 3 \quad \frac{1}{\frac{1}{4}} = 4 \quad \frac{1}{\frac{1}{5}} = 5 \quad \frac{1}{\frac{1}{6}} = 6$$

$$\frac{1}{\frac{1}{2}} = 2 \quad \frac{1}{\frac{1}{3}} = 3 \quad \frac{1}{\frac{1}{4}} = 4$$

$$\frac{2}{\frac{1}{2}} = 4 \quad \frac{3}{\frac{1}{3}} = 9 \quad \frac{4}{\frac{1}{4}} = 16$$

$$\frac{2}{\frac{1}{2}} \times \frac{3}{\frac{1}{3}} = 12$$

$$\frac{3}{\frac{1}{3}} \times \frac{4}{\frac{1}{4}} = 16$$

$$\frac{4}{\frac{1}{4}} \times \frac{5}{\frac{1}{5}} = 20$$