

LESSON 4 – PRACTICE PROBLEMS

1. Multiply and simplify. If applicable, write your answer as *both* an improper fraction *and* a mixed number.

a. $\frac{1}{6} \cdot \frac{3}{5}$

b. $\frac{8}{9} \cdot \frac{9}{12}$

c. $\frac{3}{4} \cdot 0$

d. $1\frac{1}{2} \cdot \frac{1}{2}$

e. $3\frac{1}{3} \cdot 2\frac{2}{5}$

2. Find the reciprocal for each of the following (if possible).

a. $\frac{1}{3}$

b. 2

c. $\frac{22}{7}$

d. $3\frac{1}{2}$

e. $\frac{0}{1}$

3. Divide and simplify. If applicable, write your answer as *both* an improper fraction *and* a mixed number.

a. $3 \div \frac{1}{3}$

b. $\frac{2}{5} \div \frac{5}{2}$

c. $\frac{1}{4} \div 6$

d. $3\frac{1}{2} \div 1\frac{1}{3}$

e. $\frac{2}{4} \div \frac{1}{2}$

4. Perform the indicated operations and simplify. If applicable, write your answer as *both* an improper fraction *and* a mixed number.

a. $\frac{3}{4} \div \frac{4}{5} \cdot \frac{5}{6}$

b. $\frac{1}{2} - \frac{1}{3} \cdot \frac{1}{4}$

c. $\left(2 - \frac{8}{5}\right)^2$

d. $1 - \left(\frac{1}{2}\right)^2$

e. $\frac{1}{2} \div \frac{3}{4} \div \frac{1}{4}$

5. Solve each of the following application problems using the 5-step process illustrated in the lesson. Leave final answers in mixed number form if possible.

a. Suppose your school costs for this term were \$2500 and financial aid covered $\frac{3}{4}$ of that amount. How much did financial aid cover?

b. If, on average, about $\frac{4}{7}$ of the human body is water weight how much water weight is present in a person weighing 182 pounds?

c. If, while training for a marathon, you ran 920 miles in $3\frac{1}{2}$ months, how many miles did you run each month? (Assume you ran the same amount each month)

d. If the area of a rectangle is given by the formula $A = L \cdot W$ where L = length and W = width, compute the amount of carpet needed for a rectangular room that is $12\frac{1}{2}$ feet long and $14\frac{1}{4}$ feet wide. Your final units will be square feet.

e. A recipe for Albondigas Soup makes 6 servings. A partial ingredient list includes: 1 quart of water, $\frac{1}{3}$ cup milk, 2 beef bouillon cubes, and 4 large carrots. How much of each ingredient would be in each serving? Reduce each fraction and use mixed numbers where appropriate.