Fraction Word Problems (Multiplication/Division)

When solving word problems, make sure to UNDERSTAND THE QUESTION. Look for bits of information that will help get to the answer. Keep in mind that some sentences may not have key words or key words might even be misleading. USE COMMON SENSE when thinking about how to solve word problems. The first thing you think of might be the best way to solve the problem.

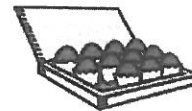Here are some KEY WORDS to look for in word problems:

Product, times: mean to multiply

Quotient, per, for each, average: mean to divide

Ex. 1:   If 3 boxes of candy weigh $6\frac{1}{2}$ pounds, find the weight per box.
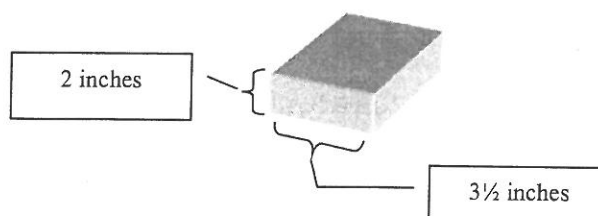
"per" means to divide

$$6\frac{1}{2} \div 3 = \frac{13}{2} \div \frac{3}{1} = \frac{13}{2} \times \frac{1}{3} = \frac{13}{6} = 2\frac{1}{6} \text{ pounds}$$

Ex. 2:   If one "2 by 4" is actually $3\frac{1}{2}$ inches wide, find the width of twelve "2 by 4"s.

twelve 2" by 4"'s here means 12 times as wide as one 2" by 4"

$$3\frac{1}{2} \times 12 = \frac{7}{\cancel{2}_1} \times \frac{\cancel{12}^6}{1} = 42 \text{ inches}$$

2 inches

3½ inches

Solve the following fraction word problems. Cancel and simplify your answers.

1. A stack of boards is 21 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there?

2. A satellite makes 4 revolutions of the earth in one day. How many revolutions would it make in $6\frac{1}{2}$ days?

3. A bolt has $16\frac{1}{2}$ turns per inch. How many turns would be in $2\frac{1}{2}$ inches of threads?

4. If a bookshelf is $28\frac{1}{8}$ inches long, how many $1\frac{7}{8}$ inch thick books will it hold?

5. Deborah needs to make 16 costumes for the school play. Each costume requires $2\frac{1}{4}$ yards of material. How many yards of material will she need?

6. The Coffee Pub has cans of coffee that weigh $3\frac{1}{4}$ pounds each. The Pub has $8\frac{1}{2}$ cans of coffee left. What is the total weight of $8\frac{1}{2}$ cans?

7. Belinda baked 9 pies that weigh $20\frac{1}{4}$ pounds total. How much does each pie weigh?

8. A piece of paper is $\frac{4}{1000}$ inches thick. How many sheets of paper will it take to make a stack 1 inch high?

9. Tanya has read $\frac{3}{4}$ of a book, which is 390 pages. How many pages are in the entire book?

10. DJ Gabe is going to serve $\frac{1}{3}$ of a whole pizza to each guest at his party. If he expects 24 guests, how many pizza's will he need?

1. Gerald bought $\frac{5}{6}$ pound of candy at one store and $\frac{3}{4}$ pound of candy at another store. How much total candy did Gerald buy?

2. Bethany ordered 12 pizzas for a party. If each person eats $\frac{3}{8}$ of a pizza, how many people can George feed with 12 pizzas?

3. The recipe says takes $2\frac{1}{2}$ cups of flour to bake a batch of cookies. Sherry wants to bake $3\frac{3}{4}$ batches of cookies. How many cups of flour will Sherry need?

4. The milk carton had $\frac{8}{9}$ gallons in it before Stu took a drink. If he drank $\frac{1}{12}$ of a gallon, how much milk is left?

5. What is $\frac{4}{5}$ of $6\frac{3}{7}$?

6. How many $\frac{3}{4}$ are in 6?