

KEY

"One who say it can not be done should not interrupt one doing it."
- Chinese Proverb

Name: _____

Date: _____

Chapter 0 – Preparing for Algebra

Welcome to the pre-algebra chapter that'll get you right in the mood for algebra. Thank you for your hard work and dedication. What you do matters.

0-1: Plan for Problem Solving

In this section, and in life, always remember that there are multiple ways to solve problems. How we solve them is our choice, as long as we fully understand, and we can explain our thinking. Please try some of these real world problems.

Ex #1: Once upon a time, people would rent movies on tapes or discs. Suppose one store would rent movies out for \$2.50/night. You bring in a coupon that reads "\$2 off a five-night rental."

If you went back in time to this historical era, how much would it have cost you to rent your chosen movie for five nights?

$$\underbrace{\$2.50 + \$2.50}_{\$5} + \underbrace{\$2.50 + \$2.50}_{\$5} + \$2.50 = \$12.50$$

$$-\$2$$

\$10.50

-OR-

$$[\$2.50 \times 5] - \$2 = \boxed{\$10.50}$$

Ex #2: I have a cup that holds 6.5 ounces of water, and I want to fill a pitcher that can hold 50 ounces when *completely* full.

I don't want to fill my pitcher all the way to the top, but rather, *mostly* to the top. How many full cups of water will fit into the pitcher?

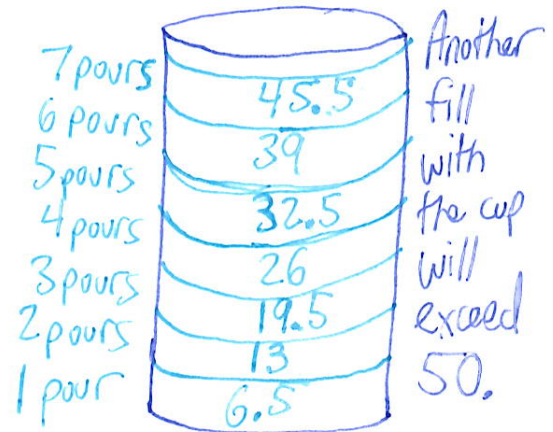
6.5 | 50.0
is equivalent to...

$$\begin{array}{r} 7 \\ 65 \overline{) 500} \\ \underline{- 455} \\ 45 \end{array}$$

-OR-

45 ← # of ounces remaining to be filled in pitcher

We see that anything beyond 7 pours would be more than 50oz



Ex #3: Which trip will take longer, and how much longer?

- Driving 225 miles at 45 miles per hour 5 hrs
- Driving 330 miles at 60 miles per hour 5 1/2 hrs

How many hours @ 45 mph does it take to drive 225 miles?

$$\begin{array}{r} 5 \\ 45 \overline{) 225} \\ \underline{- 225} \\ 0 \end{array}$$

exactly 5 hours

How many hours @ 60 mph does it take to drive 330 miles

$$\begin{array}{r} 5.5 \text{ hrs} \\ 60 \overline{) 330} \rightarrow 6 \overline{) 33.0} \\ \underline{- 30} \\ 30 \\ \underline{- 30} \\ 0 \end{array}$$

1/2 hr. longer