

What to bring to class:
Ask students to bring PM
4A and 5A.

2.1 - 2.3 Mental Math and Word Problems

(2 days, all of chp. 3)

Mental Math

* Using distributive property

$$108 \times 6 = (100 + 8) \times 6 = 600 + 48 = 648$$

$$165 \div 15 = (150 + 15) \div 15 = 10 + 1 = 11$$

$$\begin{aligned} 410 \div 13 &= (\text{think } 30 \text{ } 13\text{'s makes } 390, \\ &\quad +1 \text{ } 13 \text{ makes } 403 \\ &\quad 7 \text{ remain}) \\ &= 31 \text{ R } 7 \end{aligned}$$

* Compensation:

$$\text{for } +: \quad \overset{+13}{\curvearrowright} 87 + 56 = 100 + 43 = 143$$

$$\text{for } -: \quad 87 - 56 = 81 - 50 = 31$$

$$\text{for } \times: \quad 25 \times 36 = (25 \times 4) \times 9 = 900$$

$$\begin{aligned} \text{for } \div: \quad 204 \div 6 &= 102 \div 3 = \\ &\quad (90 + 12) \div 3 = 30 + 4 \end{aligned}$$

Word Problems

Should be

- * Short, Clear, Succinct
- * Interesting but not Flowery
- * Realistic but not contrived
- * Self contained and well defined

(Say: There may be many ways to answer, but only one, or at most, several specific answers)

In sets which

- * are not varied in context (different models, etc.), not underlying math
- * build up 1 step \rightarrow 2 step \rightarrow multi step

We will do many word problems:

Examples:

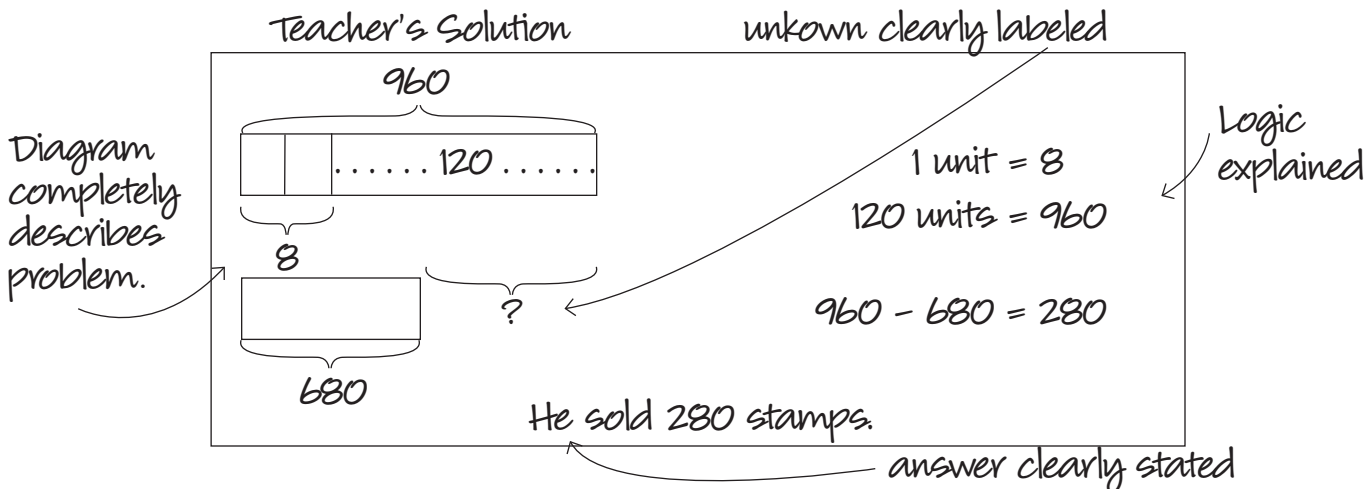
Note to instructor: Do selection from Sing 3A pgs. 66-67

- * Do some at top of page by mental math.
- * Do some word problems (w/Teacher's solutions)
For division prob, ask for interpretation

Teacher's Solutions (Graded on this criteria)

Example

There are 8 stamps in a set. Gopal bought 120 sets. After selling some stamps, he had 680 left. How many did he sell?



Have students do problems 7 - 9 on pg 90 sing 3A time permitting. Have students present Teacher's solutions (T.S.).

HW Do HW set Read section 2.2 & section 2.3, then do HW set 7.
Bring sing 3A & 5A to next class

(*) Note to Instructor:

- * Put students in pairs of 2, divide class into 3 sets.
- * Assign 3 problems at a time, one to each $\frac{1}{3}$ of the class.
- * Give only 2 - 3 minutes - strictly timed.
- * While students work, write questions on the Blackboard.
- * Select 3 pairs of students to go up and present Teachers solution.

Do Sing 3A; pg 54 prob 10 - 12
 pg 55 prob 9 - 11
pg 56 prob 9 - 11 if time

Multi-step Word problems combine 2 different operations - the most interesting cannot be classified as a +, -, x, ÷ problem.

Do Sing 5 as in (*), pg

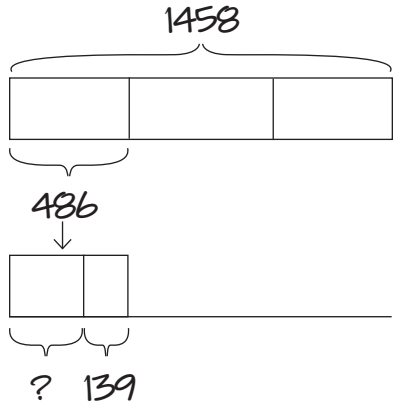
Book 5A, pg 22 - 23

- * Go over pg 22
- * Work thru #1 - 3 with class
- * groups of 2 for # 1 - 4 of practice 1D of Sing 5A

Then present:

* 5A pg63 #31

Peter, John, and Dan shared \$1458 equally. Peter used part of his share to buy a bicycle and had \$139 left. What was the cost of the bicycle?



$$3 \text{ units} = 1458$$

$$1 \text{ unit} = 1458 \div 3 = 486$$

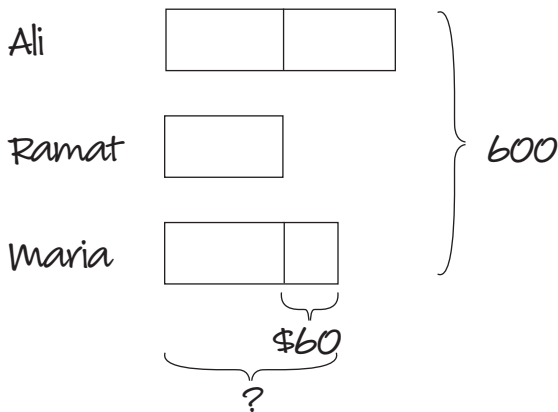
$$486 - 139 = 486 - 140 = \$347$$

$$\begin{array}{r} 486 \\ 3 \overline{)1458} \\ \underline{12} \\ 25 \\ \underline{24} \\ 18 \\ \underline{18} \\ 0 \end{array}$$

The bike cost \$347.

* 5A pg90 #16

Ali saved twice as much as Ramat. Maria saved \$60 more than Ramat. If they saved \$600 altogether, how much did Maria save?



$$4 \text{ units} + \$60 = \$600$$

$$4 \text{ units} = \$540$$

$$1 \text{ unit} = \$135$$

$$135 + 60 = 195$$

Maria saved \$195.

In groups of 2,

Assign #2, #4, #8 on page 25 of Sing 5A

Send to the board after 4 min to present Teacher's solutions

If time, give a quiz.

HW Do HW set 6 and HW set 8

 (Say: we did some of these problems)