

**Lesson 72 : Using Different Strategies ( Looking for a Pattern, Working Backwards, etc )  
to Solve for the Unknown in Simple Equations Involving One or More Operations on  
Whole Numbers and Fraction**

**Week 6**

**Objective :** Uses different strategies ( looking for a pattern, working backwards, etc ) to solve for the unknown in simple equations involving one or more operations on whole numbers and fractions..

**Value Focus :** Thriftiness

**Prerequisite Concepts and Skills :**

- ☐ Concept of four basic processes
- ☐ Multiplying, adding and subtracting numbers
- ☐ Steps in solving word problem

**Materials :** number patterns, flashcards

**References :** K to 12 Gr. 5 CG M5AL-IIIIf-14, LM,

**Instructional Procedure**

**A. Preliminary Activities**

**1. Drill**

Have a drill on identifying operations suggested by word clues.

Ask : What operation is suggested by the following words/phrases?

increased by

added to

deducted from

doubled

decreased by

multiplied by

take away

**2. Review**

Guessing Game

- a. Divide the class into 4 groups.
- b. Teacher will flashes cards with number pattern. Let them guess the missing term.
- c. The group that first guess the correct answer will get a point.

d. The group with the highest score wins the game.

### 3. Motivation

Who will give you your daily allowance? How much was it? Did you spend them all?  
Why or why not? What character traits did you show?

### B. Developmental Activities

Carla received a weekly allowance of Php250.00 from her parents. She wants to save some money for her future use. On Monday, she deposited Php15.00 in her piggy bank. She deposited twice as much on Tuesday and Friday. How much money did Carla deposit?

#### 1. Presentation



Do you think Carla can easily solve it showing a solution? Let us try to help Carla to show the complete solution. Let's do it backwards.

Friday twice as much - ( 2 x Php15.00 )

Tuesday twice as much - ( 2 x php15.00 )

Monday - ( Php15.00 )

$$( 2 \times 15 ) + ( 2 \times 15 ) + 15 = n$$

$$30 + 30 + 15 = \text{Php}75.00$$

Carla deposited/saved Php75.00 from her allowance.

What kind of pupil was Carla? Are you doing the same of what Carla did?

#### 2. Performing the Activities

Group the pupils into 4. Let them answer this problem. Write your solution and present your work when all the groups have done.

At a bake sale Mrs. Smith sold 6 dozen cookies before lunch. After lunch, Mrs. Smith sold another 7 dozen cookies. When it was time to leave, they had 2 dozen cookies left. How many cookies did she have at the start of the bake sale?

$$2 + 7 + 6 = 15$$

She had 15 dozen of cookies at first.

### 3. Processing the Activities

Ask the groups to present and discuss their answers on the board.

How did you find the activity? How do you solve the problem?

### 4. Reinforcing the Concept and Skill

- Discuss the presentation under “Explore and Discover” in LM.
- For more practice, Have the pupils work on “Get Moving”
- Ask the pupils to work on the exercises under “Keep Moving”

### 5. Summarizing the Lesson

Lead the pupils to give the following generalization by asking :

How do we solve a problem using a working backwards strategy?

To solve a problem using **working backwards strategy**

- ☐ students find the solution to a problem by starting with the answer and using inverse operations to undo the steps stated in the problem.

e.g.  $a + b = c$  :  $c - a = b$

- ☐ students found the answer by starting with the end result and working back to the beginning.

### 6. Applying to New and Other Situations

Ask the pupils to solve problems under “Apply Your Skills” in LM.

### **C. Assessment**

Read, analyze and solve the problems carefully.

1. After finishing her shopping, Chelsea wants to have Php25 left. She plans to buy sandals for Php45 and a purse for Php20. How much money does she need?
2. Hannah ordered 2 suits for Php175 each and a pair of shoes. The total cost was Php395. What was the cost of the shoes?
3. It snowed twice as much in January as in December. December had 1 inch less snowfall than March. March had 4 inches of snow. How much snow fell in January?
4. Jack walked from Santa Clara to Palo Alto. It took 1 hour 25 minutes to walk from Santa Clara to Los Altos. Then it took 25 minutes to walk from Los Altos to Palo Alto. He arrived in Palo Alto at 2:45 P.M. At what time did he leave Santa Clara?
5. Mary has some jelly beans. Joan had 3 times as many as Mary but ate 4 and now she has 5. How many jelly beans does Mary have?

### **D. Home Activity**

#### **Remediation**

Solve the following problems. Show your solution.

1. When Jose rode on a bus, he noticed some people sitting. At the next bus stop, 5 people got on and 2 people got off. Two stops later, 7 people got on. All 15 people got off the bus at the terminal station. How many people were in the bus when Jose got on the bus?
2. Sarah got on the school bus. At the stop after Sarah's, 7 students got on. Five students got on the bus at the next stop. At the last stop before the school, 9 students got on. When the bus arrived at school, 38 students got off. How many students were already on the bus when Sarah got on?

#### **Enrichment**

Show your solution in solving this problem.

1. Dave, Nora, Tony, and Andrea are members of the same family. Dave is 2 years older than Andrea, who is 21 years older than Tony. Tony is 4 years older than Nora, who is 7 years old. How old are Dave, Tony, and Andrea?