Lesson 59: Finding the Percentage in a Given Problem

Week 2

Objective: Finds the percentage in given problem.

Value Focus: Studious and Participative

Prerequisite Concepts and Skills

- Identifying the base, percentage and rate in a problem.
- Basic Facts on Multiplication and Addition

Materials: strips of cartolina, flash cards

References: K to 12 Curriculum Guide, LM Math Grade 5 pages
Building New Horizon in Math: A Simplified Approach p. 302-305
Growing Up with Math 5 p.220-222
Lesson Guide in Elementary Mathematics Grade 6 p. 316-319
Workbook in Mathematics 6 Third Quarter, Rubio, May Ester M. p. 16-18
Workbook on Math (Grade 6), Cayanan, Remedios p.140

Instructional Procedure:

A. Preliminary Activities

1. **Drill** (Mental Computation on Changing percent to ratio, decimal to percent, fraction to percent and vice versa)

Materials: flash cards, answer sheets

Mechanics:

a. Have two lines of pupils of the same number of members if possible.
b. Each pupil in front of the line renames the ratio to percent, decimal to percent, fraction to percent and vice versa by writing the number on the board as the teacher flashes the card.
c. As soon as the pupil writing his answer on their sheet finishes, he has to touch the second pupil in the line and goes at the end of the line.
e. The teacher flashes the next card and repeat steps in letter b and c.
f. The teacher checks the answers and adds the scores after the last card is flashed.

2. Review (Identifying the base, percentage and rate in a problem)

Materials: strips of cartolina

Mechanics:

a. Divide the class into 4 groups. One representative from each group stands at the back of the classroom.
b. Flash the strips of cartolina with a short problem written on it. The

representative from each group will identify the missing/unknown part in the problem.

c. The first one who gives the correct answer will get the point.
d. The game continues until all the pupils from each group have participated.
e. The group with the most number of points wins.

3. Motivation

What's your target score in a 20-item test? What passing grade is it? (75%, 80%, 90% or 100%? The pupils have the freedom to choose.

Ask: Do you study your lesson every day? Do you listen well and participate in class discussion?

Ask: Why do you need to study? Will it help you prepare for your future? Emphasize the value of being studious and participative.

B. Developmental Activities

1. Presentation

Vincent, a boy from a fishing village is a diligent and studious pupil. He goes to school and every day and does his work well. He never skips studying his lesson every night. When he took their 50-item quarter examination he got 96% of it correctly? What is his score?

Ask:

- Who is the boy from the fishing village?
- How is he as a pupil?
- Did he do well in school? How do you know?
- How many items is their test?
- What rating does Vincent get in the test? Is this a high rating? How do you know?
- Will you do the same? Why?

2. Performing the Activity

Ask the pupils to work in groups in solving the problem.

50 **x 96**	Step 1: Arranged the numbers vertically.
50 **x 0.96**	Step 2: Move the decimal point of 96% twice from right to left.
50	Step 3:

x 0.96
300
450
+ 000__
048.00

Multiply the numbers following the steps in multiplication.

48 – number of correct items Vincent got out of 50-item test.

3. Processing the Activities

After the group presented and checked their work, call on the leader to relate what they have done to solve the problem.

Ask:

- How do we solve for the percentage?
- Did you move the decimal point of the rate from right to left?
- How many move of decimal point do we move?

4. Reinforcing the Concept and Skill

Discuss the presentation under Explore and Discover of page __, LM Math Grade 5. Then give these exercises.

Complete the table by finding the percentage.

Base	Rate	Percentage
1. 800	35%	
2. 150	49%	
3. 300	12%	
4. 450	90%	
5. 250	75%	

Allow pupils to answer exercises A and B under ***Keep Moving,*** pages ____ and LM Math Grade 5. Check the pupils' answer.

5. Summarizing the Lesson

Lead the pupils to generalize as follows:

In finding the percentage of a given number follow these steps:

- Find the rate in the given problem.
- Arrange the numbers in vertically.
- Move the decimal point of the given rate twice from right to left.
- Multiply the numbers following the steps in multiplication.
- Count the number at the right of the decimal point which will decide where to put the corresponding decimal point.

Another way of solving percentage is by changing percent to fraction. You will be guided by following these steps:

1. Convert percent to fraction. You can use the lowest term of the fraction if you want.
2. Multiply the given number to the numerator. If possible use cancellation.
3. Divide the product of the given number and the numerator by the denominator.

6. Applying to New and Other Situations

Let the pupils answer Exercise A under ***Apply Your Skills*** on page ____, LM Math Grade 5. Check the pupils' answer after the given period of time.

C. Assessment

A. Directions: Complete the table by identifying the percentage of the following items.

Rate	Base	Percentage
1. 25%	40	
2. 10%	120	
3. 15%	125	
4. 20%	300	
5. 50%	780	
6. 75%	550	
7. 80%	175	
8. 90%	210	
9. 42%	436	
10. 56%	741	
11. 5%	290	
12. 3%	325	
13. 18%	275	
14. 20%	250	
15. 45%	900	

B. Solve the following percentage problems.

1) Forty-six percent of people surveyed said that they exercised on a fairly regular basis. If 12 100 people were surveyed, how many of them exercise?

2) The price of gasoline decreased by 18%. If a liter of gasoline sold P 21.15 before the decrease, what was the amount of the decrease?

3) In a certain city, about 25% of the people are between the ages of 20 and 40 years. If the city population is 1 430 000, how many people are between those ages?

4) The Jimenez family planned to save at least 7.5% of their monthly income of P 12 500. How much did they plan to save?

5) Marvin, a basketball player, usually scores 80% of his field shots. If he attempted 40 field

shots during a game, how many did he score ?

D. Home Activity

Remediation

A. Answer the following.

1. What is 25% of 4?
2. N is 50% of 2.
3. 200 % of 3 is what number?
4. 75% of 12 is ____?
5. 60% of 30 is N.
6. 30% of 600 is what number?
7. 230% of 90 is N.
8. 150% of P 400 is _____.
9. 36% of 95 is N.
10. 48% of 290 is what number?

B. Read, analyze and solve.

1. Cesar invited 300 kids to his birthday party. Only 15% of the kids did not show up. How many kids came to the party?
2. There were 50 pupils in Grade III. If 28% of the pupils were absent, how many pupils were present?
3. Rosa got 20% of an 80 item test incorrectly. How many items did she get correctly?

Enrichment

A. For each problem, write an equation using the percentage formula then solve it.

1. Jose Rizal Elementary School has a total population of 520. Based on the data gathered about the nutritional status of the pupils from Grades I-VI, 85 % of them were wasted, normal and overweight. How many pupils were not wasted, normal and overweight?

2. During the conduct of the Philippine Informal Reading Inventory among 210 Grade One pupils, it showed that 30% are non-reader for the second quarter. How many pupils are already readers during the second quarter?

3. From the concluded School Pupil Government election, it revealed that Gian got 42% of votes from 800 pupils of all grade levels. How many votes did Gian get?

4. Susie got 82% of the 200 item test correctly. How many items did he get correctly?

5. There are 450 Grade Five pupils in Novalichez Elementary School. Of the 450

pupils, 56% were able to join the field trip. How many pupils were able to join the field trip?