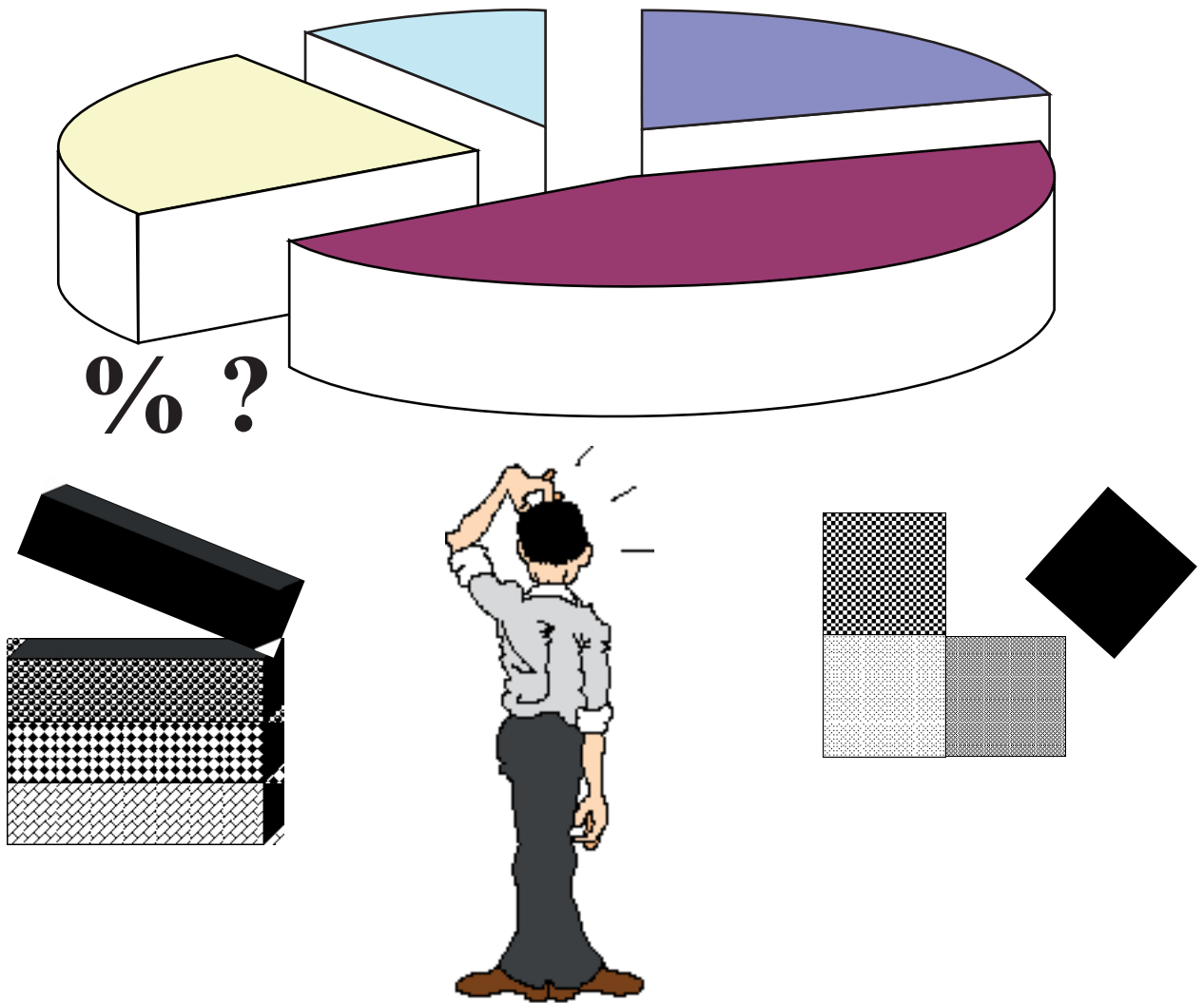


# UNDERSTANDING PERCENT



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Revised  
by the Learning Resource Management and Development System (LRMDS) Region VII  
under the Strengthening the Implementation of Basic Education in Selected Provinces in  
the Visayas (STRIVE)





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**REGIONAL LEARNING MATERIALS CENTER VII (RLMC VII)**



Department of Education, Culture and Sports  
Region VII, Central Visayas  
Cebu City

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**Lia S. Chavez**

Writer/Editor(Elementary/Math/Science)

PROBE RLMC VII

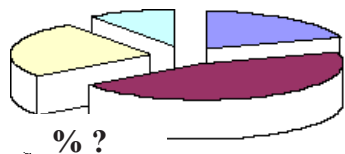
Writer

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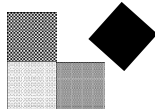
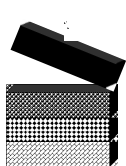
# CONTENTS

How to Use	1
Teacher's Guide	2
Answer Key	
Worksheet 1	3
Worksheet 2	3
Worksheet 3	4
Worksheet 4	4
Worksheet 5	4
Worksheet 6	5
Worksheet 7	5
Worksheet 8	5
Worksheet 9	6
Worksheet 10	6
Worksheet 11	6
Worksheet 12	6
Worksheet 13	7
Worksheet 14	7
Worksheet 15	8
Worksheet 16	8
References	



# Understanding

A Teacher Support Material  
Elementary Mathematics VI Pupils



## Contents:

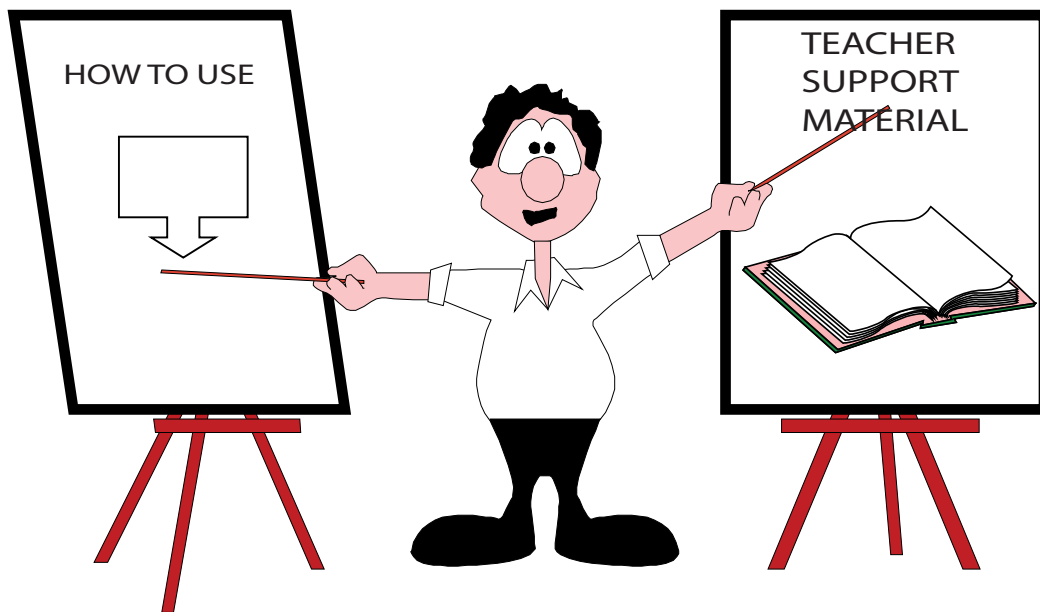
- Teacher's Guide
- Master Copy of the Worksheets

Worksheet 1	Visualizing Percent
Worksheet 2	Changing Fractions to Percent and Vice Versa
Worksheet 3	Changing Decimals to Percent and Vice Versa
Worksheet 4	Changing Percents to Fractions, Percents to Decimals, Fractions to Percents, Decimals to Percents and Fractions to Decimals
Worksheet 5	Translating Percentage Problems
Worksheet 6	Finding Percentage
Worksheet 7	Translating Rate Problems
Worksheet 8	Finding the Rate
Worksheet 9	Translating Base Problems
Worksheet 10	Finding the Base
Worksheet 11	Finding the Percentage, Rate and Base
Worksheet 12	Determining the Base, Rate and Percentage
Worksheet 13	Solving Word Problems Involving Discounted Price or Sale Price
Worksheet 14	Solving Word Problems to Find the Commission or Discount
Worksheet 15	Solving Word Problems Involving Interest
Worksheet 16	Solving Word Problems Involving Discount, Interest and Commission

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PHILIPPINES-AUSTRALIA PROJECT IN BASIC EDUCATION (PA-PROBE)  
REGIONAL LEARNING MATERIALS CENTER (RLMC VII)



1. Read first and understand the content of this material before using.
2. It is suggested that the sequencing of the activities be followed from first to last since these activities are developed based on the objectives in the Philippine Elementary Learning Competencies. Each activity develops a skill leading to the next higher level or more complex skill.
3. If the worksheets are to be used during the development phase of the lesson, set a time frame for the pupils to finish so that they will not spend so much time on the worksheets alone. Lesser time may be needed by the pupils for the worksheets if they will be used as enrichment or practice exercises.
4. Encourage the pupils to give mathematical concepts or ideas to support their answers.
5. Look for ways to replicate the worksheets for the use of the pupils.

## TEACHER'S NOTES

Pupils may have been introduced to the concept of percent in Grade V. All through the years, this has been a topic that many pupils and teachers find difficulty in understanding and in applying the skill with confidence. The concept of percent has many applications in our daily lives and as such, is worthy of increased attention as pupils approach the end of elementary schooling. In Grade VI, it is essential that pupils undergo experiences which will enable them to review, consolidate and practice the use of percent and percentages.

Percent means per hundredth or divided by one hundred. It comes from the Latin word per centrum. The percent sign is % . It is also the ratio of the number of parts to one hundred, thus,  $n\% = n/100$ . In general,  $n\%$  also means  $n \times 0.01$  or  $n \times 1/100$ .

Percentage is the number obtained after getting the percent of an original number. In the equation  $24\%$  of  $986 = 236.64$ ,  $24\%$  is called the rate while  $986$  is called the base. The answer  $236.64$  is called the percentage.

This learning material contains sixteen (16) worksheets, an answer key, Teacher's Guide and some practical tips on how to use.

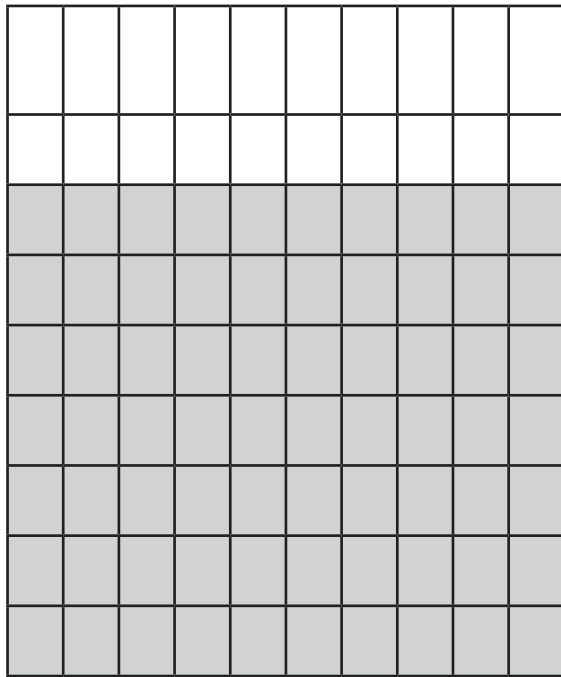
Activities are hierarchically arranged from simplest to the most complex based on the objectives in the Philippine Elementary Learning Competencies.

Activities included:

Worksheet 1	Visualizing Percent
Worksheet 2	Changing Fractions to Percent and Vice Versa
Worksheet 3	Changing Decimals to Percent and Vice Versa
Worksheet 4	Changing Percent to Fraction, Percent to Decimal, Fraction to Percent, Decimal to Percent and Fraction to Decimal
Worksheet 5	Translating Percentage Problems
Worksheet 6	Finding Percentage
Worksheet 7	Translating Rate Problems
Worksheet 8	Finding the Rate
Worksheet 9	Translating Base Problems
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Worksheet 11	Finding the Percentage, Rate and Base
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Worksheet 15	Solving Word Problems Involving Interest
Worksheet 16	Solving Word Problems Involving Discount, Interest and Commission



3. \_\_\_\_\_



- B. Shade parts of each of the figures below to represent the given percent.



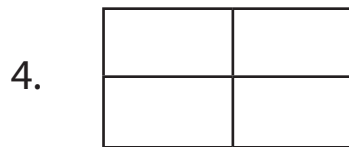
75%



100%



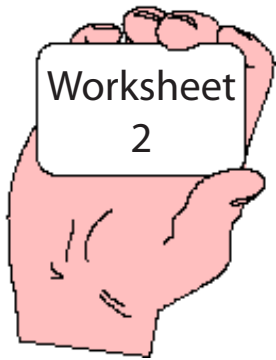
50%



25%

Suggested time frame:  
If used during the developmental phase - 10 minutes  
If used as practice exercise - 5 minutes





## Changing Fractions to Percents and Vice Versa

- Change to percents.

a.  $1/100$

e.  $6/25$

b.  $3/200$

f.  $1/50$

c.  $5/16$

g.  $1/4$

d.  $2/5$

h.  $1/2$

Hint: The term percent is derived from per centum, a Latin word that means hundredths. The symbol% is the sign of percent. A number written with %, such as 5% means 5 of every 100. As a fraction, 5% is  $5/100$ .

To change fractions to percents, note this example.

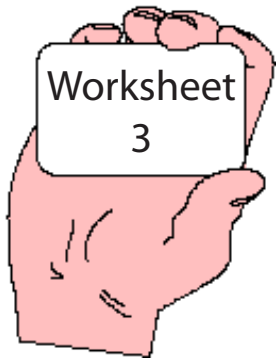
$$3/20 = 3 \div 20 = .15 = 15\%$$

$$3/8 = 3 \div 8 = .375 = 37.5\%$$

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 15 minutes  
- 10 minutes



## Changing Decimals to Percents and Vice Versa

- A. Express each decimal as percent.
  - a. 0.03
  - b. 9.33
  - c. 0.075
  - d. 8.35
  - e. 0.9
  - f. 0.475
  - g. 12.5
  - h. 0.01
  
- A. Express each percent as decimal.
  - a. 80%
  - b. 18%
  - c. 23%
  - d. 13.08%
  - e. 190%
  - f. 0.5%
  - g. 25.8%
  - h. 200%

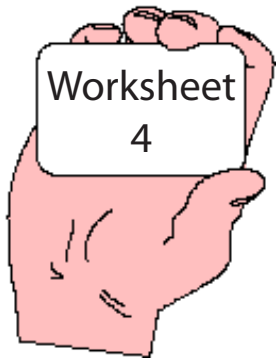
Hint: Decimals can be changed to percent by:  
a. moving the decimal point two places to the right, and  
b. annexing the % sign.

Percent can be changed to decimals by:  
a. moving the decimal point two places to the left, and  
b. omitting the % sign.

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 10 minutes  
- 5 minutes



## Changing Percent to Fraction, Percent to Decimal, Fraction to Percent, Decimal to Percent and Fraction to Decimal

- Copy and complete the tables.

Table 1

	Percent	Fraction	Decimal
1.	63%		
2.	47%		
3.	14%		
4.	72%		

Table 2

	Decimal	Percent	Fraction
5.	0.67		
6.	0.08		
7.	0.63		
8.	0.43		

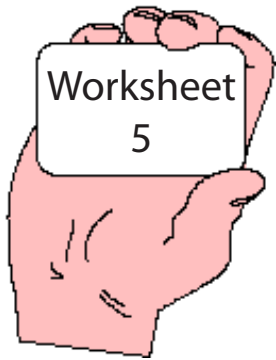
Table 3

	Fraction	Decimal	Percent
9.	$\frac{1}{6}$		
10.	$\frac{4}{7}$		
11.	$\frac{3}{8}$		
12.	$\frac{3}{5}$		

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 15 minutes  
- 10 minutes



## Translating Percentage Problems

- Write an equation for each of the following:
  1. What is 20% of 60?
  2. What is 10% of 490?
  3. What is 60% of 4 000?
  4. What is 12% of 350?
  5. What is 65% of 25 000?
  6. What is 7% of P 495.50?
  7. What is 25% of 500 000?
  8. What is 400% of 876 000?

Hint: In symbols,  
is is translated as "="  
of is translated as "x"  
what is translated as "n" or "?"

Thus, if the question is "What is 20% of 80?", our equation will be

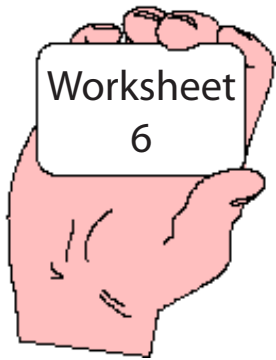
$$n = .20 \times 80 \text{ or } n = 20/100 \times 80$$
$$? = .20 \times 80 \text{ or } ? = 20/100 \times 80$$

Percent is expressed in decimal or fraction form.

Suggested time frame:

If used during the developmental phase  
if used as practice exercise

- 10 minutes  
- 5 minutes



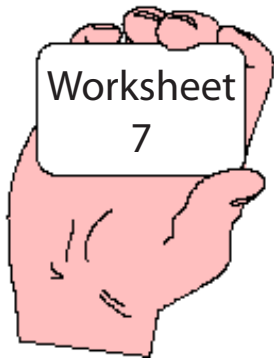
## Finding the Percentage

- Solve for the answers.
  1. What is 26% of 95?
  2. What is 18% of 126?
  3. What is 67% of 4 00?
  4. What is 200% of 50?
  5. Find 45% of 5 000?
  6. What is 35% of P 795.95?
  7. Find 15% of P 300.00?
  8. What is 40% of 728?

Hint: If you are asked to find 35% of 190, the number you are to find is the percentage where the rate is 35% and the base is 190. The rate is expressed as decimal. Use this formula:  $P = R \times B$

Suggested time frame:

If used during the developmental phase	- 15 minutes
if used as practice exercise	- 10 minutes



## Translating Rate Problems

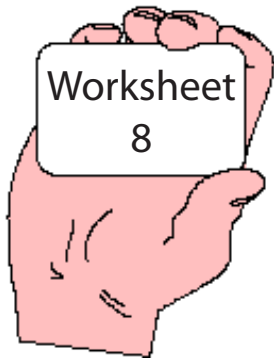
- Write an equation for each of the following:
  1. 25 is what percent of 120?
  2. What percent of 500 is 15?
  3. What % of 60 is 45?
  4. What percent of 500 is 25?
  5. 56 is what percent of 800?
  6. What percent of 2 000 is 150?
  7. P 75 is what percent of P 375?
  8. What percent of P 125.00 is P 22.50?

Hint: In symbols,  
is is translated as "="  
of is translated as "x"  
what is translated as "n" or "?"

Thus, if you are asked what % of 20 is 45?, the equation will be  $n \times 20 = 45$  or  $? \times 20 = 45$ .

Suggested time frame:

If used during the developmental phase	- 15 minutes
if used as practice exercise	- 10 minutes



## Finding the Rate

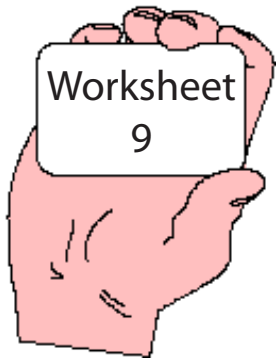
- Solve for the answers.
  1. What % of 21 is 8?
  2. 5 is what % of 34?
  3. Find the rate if the base is 597 and the percentage is 72.
  4. What percent of 354 is 48?
  5. 24 is what percent of 156?
  6. 21 is what % of 960?
  7. What % of 451 is 63?
  8. Find the rate if the percentage is 37 and the base is 98.

Hint: In solving for the rate, we use the formula:  $R = P \div B$ , where R is expressed as % (by multiplying the quotient of P and B by 100)

Suggested time frame:

If used during the developmental phase  
if used as practice exercise

- 20 minutes  
- 15 minutes



## Translating Base Problems

- Write an equation for each of the following:
  1. 20% of what number is 75?
  2. Twelve percent of what number is 480?
  3. Ten is 5% of what number?
  4. 127 is 64% of what number?
  5. 75% of what number is 450?
  6. 90% of \_\_\_\_\_ = P 729
  7. 75% of \_\_\_\_\_ = 450
  8. 15% of what number is 4.5?

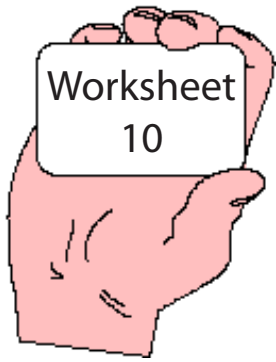
Hint: In symbols,  
is is translated as "="  
of is translated as "x"  
what is translated as "n" or "?"

Thus, if you are asked 12% of what number is 3?, the equation will be  $.12 \times n = 3$  or  $12/100 \times n = 3$ , where R is expressed as a decimal or a fraction.

Suggested time frame:

If used during the developmental phase	- 15 minutes
if used as practice exercise	- 10 minutes





## Finding the Base

- Find the base if each number pair is arranged as rate (first number) and percentage (second number).
  1. 55%, 165
  2. 15%, 57
  3. 43%, 540
  4. 27%, 198
  5. 32%, 400
  6. 14%, 270
  7. 20%, 490
  8. 25%, 195

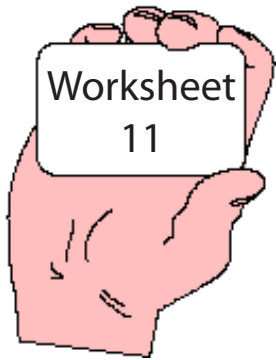
Hint: In solving for the base, we use the formula:  $P \div R = B$ ; where R is expressed as a decimal,  
Example: 42%, 785

Solution:  $P \div R = B$   
 $785 \div .42 = 1869.05$

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 20 minutes  
- 15 minutes



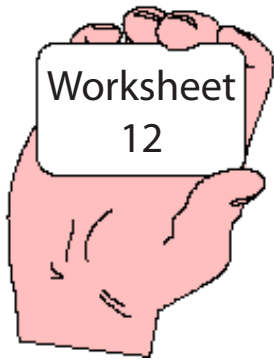
## Finding the Percentage, Rate and Base

- Solve.
  1. What is 20% of 150?
  2. 45 is what percent of 200?
  3. 20% of what number is 75?
  4. 10% of what number is 25?
  5. What percent of 500 is 45?
  6. What % of 300 is 75?
  7. 80% of P 50 000 is how much?
  8. 12 is 8% of what number?

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 25 minutes  
- 15 minutes



## Determining the Base, Rate and Percentage in a Given Problem

- Study the problems below and solve to find what are asked.

1. Carlos earned P 750 in selling fruits and vegetables. He saved 50% of his earnings for his allowance. How much did he save?

B = \_\_\_\_\_ R = \_\_\_\_\_ P = \_\_\_\_\_

2. There are 456 grade six pupils in a certain school. Of this number, 386 have planted fruit tree seedlings. What percent of the pupils have planted fruit tree seedlings?

B = \_\_\_\_\_ R = \_\_\_\_\_ P = \_\_\_\_\_

3. Rhea was assigned to arrange the bookshelves in the library. Last night, she finished arranging 14 shelves. This comprises 25% of all the bookshelves she has to arrange. How many bookshelves were assigned to her?

B = \_\_\_\_\_ R = \_\_\_\_\_ P = \_\_\_\_\_

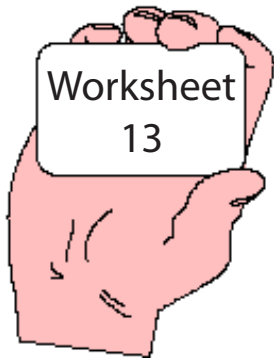
Suggested time frame:

If used during the developmental phase

- 15 minutes

If used as practice exercise

- 10 minutes



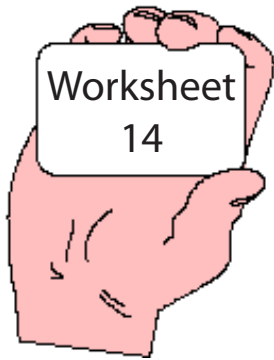
## Solving Word Problems Involving Discounted Price or Sale Price

- Solve the problems below to find the discounted price or sale price. Show your solutions.
  1. A bag was sold at a 20% discount. If the marked price of the bag was P 875.95, how much was its selling price?
  2. A pair of trousers had a marked price of P 2 545.00. The store offered a 25% discount. What was the sale price?
  3. An item sold at P 765.95 is now on sale at a 40% discount. What is the item's selling price?

Hint: Discount refers to the reduction in prices. A discount rate is the amount to be deducted per P 100 of the original price. The list or marked price is the regular price of an item. The net or sale price is the price of an item after deducting the discount from the list or marked price.

Suggested time frame:

If used during the developmental phase	- 25 minutes
If used as practice exercise	- 20 minutes



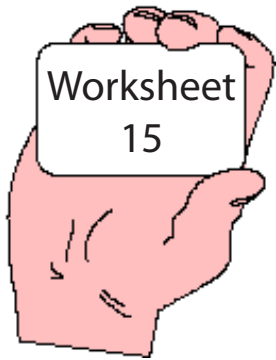
## Solving Word Problems to Find the Commission or Discount

- Solve these problems.
  1. A sales representative works for a commission rate of 7% of sales. If his total sales for the month amounts to P 18 865, how much commission will he receive?
  2. Susie receives a 12% commission for all the blouses she sells each week up to P 3 000. If her sales for one week amounted to P 12 000, how much was her commission?
  3. Senen earns a commission of 15% on what he sells. Last month, his sales to-

**Hint:** A commission is a certain percent of the total sales earned by an agent or a salesperson who buys or sells goods for another. this amount is deducted from the total or gross sales and goes to the agent. The amount that goes to the owner of the goods after the commission has been deducted is called the net proceeds. The percent of sales that determines the commission is called the rate of commission.

**Suggested time frame:**

If used during the developmental phase	- 25 minutes
If used as practice exercise	- 20 minutes



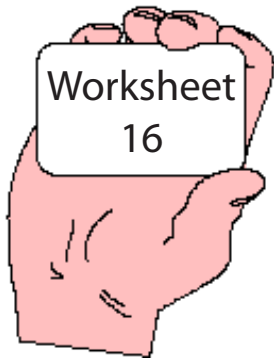
## Solving Word Problems Involving Interest

- Solve the problems below.
  1. Find the interest of a P 3 000 loan at 14% per year for 2 years.
  2. Archie borrowed P 8 500 from the bank at the rate of 12% per year for 3 years. What is the total amount that he must pay?
  3. If Junjun's money earns 15% interest annually, what is the value of his P 300 500 at the end of the year?

Hint: Interest is the amount charged for the money deposited in the banks or for money borrowed (loan) for a certain period of time. the principal is the amount of money borrowed. The time is the period allotted for the repayment of the principal plus interest.

Suggested time frame:

If used during the developmental phase	- 25 minutes
If used as practice exercise	- 20 minutes



## Solving Word Problems Involving Discount, Interest and Commission

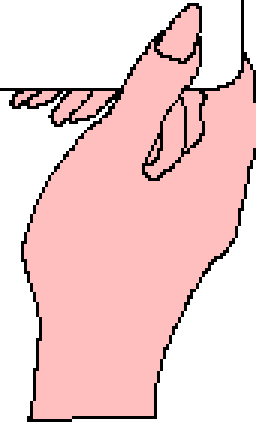
- Solve the following problems.
  1. Mrs. Santos invested P 15 000 in the money market for 2 years. The yearly rate of interest was 12%. How much did the money earn in 2 years?
  2. The original price of a pair of shoes was P 675. It is now on sale at a 16% discount. What is the sale price?
  3. Carlos sells pocketbooks on a 12% commission basis. If his sales totalled P 2 195 for one month, how much was his commission for that month?
  4. Mr. and Mrs. Lumayag deposited P 50 500 in a savings bank which pays an interest rate of 5.7% every year. How much interest does their deposit earn in one year?

Suggested time frame:

If used during the developmental phase  
If used as practice exercise

- 25 minutes  
- 20 minutes

ANSWER KEY



Worksheet 1

A. 1.) 20%

2.) 30%

3.) 70%

B. 1.



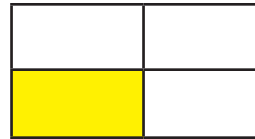
3.



2.



4.



Worksheet 2

A. 1%

D. 40%

G. 25%

B. 1.5%

E. 24%

H. 50%

C. 31.25%

F. 2%



### Worksheet 3

#### A. Decimals to percents

- |         |          |          |
|---------|----------|----------|
| a. 3%   | d. 835%  | g. 1250% |
| b. 933% | e. 90%   | h. 1%    |
| c. 7.5% | f. 47.5% |          |

#### B. Percents to decimals

- |        |          |         |
|--------|----------|---------|
| a. .8  | d. .1308 | g. .258 |
| b. .18 | e. 1.9   | h. 2.00 |
| c. .23 | f. .005  |         |

### Worksheet 4

#### A. Decimals to percents

- |                              |                          |                 |
|------------------------------|--------------------------|-----------------|
| 1. $63/100$ , .63            | 5. 67%, $67/100$         | 9. .17, 17%     |
| 2. $47/100$ , .47            | 6. 8%, $8/100$ or $2/25$ | 10. .57, 57%    |
| 3. $14/100$ or $7/50$ , .14  | 7. 63%, $63/100$         | 11. .375, 37.5% |
| 4. $72/100$ or $18/25$ , .72 | 8. 43%, $43/100$         | 12. .6, 60%     |

### Worksheet 5

- |                         |                               |                               |
|-------------------------|-------------------------------|-------------------------------|
| 1. $n = .20 \times 60$  | 4. $n = .12 \times 350$       | 7. $n = .25 \times 500\,000$  |
| 2. $n = .10 \times 490$ | 5. $n = .65 \times 25\,000$   | 8. $n = 4.00 \times 876\,000$ |
| 3. $n = .12 \times 350$ | 6. $n = .07 \times P\,495.50$ |                               |

## Worksheet 6

1. 24.7

4. 100

7. 45 000

2. 22.68

5. 2 250

8. 291.2

3. 268

6. P 278.58

Sample solution for number 1: What is 26% of 95?

$$\begin{aligned} R &= .26 \\ B &= 95 \\ P &= ? \end{aligned}$$

Using the formula:

$$\begin{aligned} P &= R \times B \\ R &= .26 \times 95 \\ B &= 24.7 \end{aligned}$$

## Worksheet 7

1.  $n \times 120 = 25$

4.  $n \times 500 = 25$

7.  $n \times P 375 = P 75$

2.  $n \times 500 = 15$

5.  $n \times 800 = 56$

8.  $n \times P 125.00 = P 22.50$

3.  $n \times 60 = 45$

6.  $n \times 2\,000 = 150$

## Worksheet 8

1. 38%

4. 14%

7. 14%

2. 15%

5. 15%

8. 38%

3. 12%

6. 2%

Sample solution for number 1:

$$n \times 21 = 8$$

$$R = ?$$

$$B = 21$$

$$P = 8$$

Using the formula:

$$R = P / B \times 100$$

$$R = 8 / 21$$

$$B = .38 \times 100$$

$$= 38\%$$

### Worksheet 9

1.  $.20 \times n = 75$

2.  $.12 \times n = 480$

3.  $.05 \times n = 10$

4.  $.64 \times n = 127$

5.  $.75 \times n = 450$

6.  $.90 \times n = P 729$

7.  $.75 \times n = 450$

8.  $.15 \times n = 4.5$

### Worksheet 10

1. 300

2. 380

3. 1 255.80

4. 733.33

5. 1 250

6. 1 928.57

7. 2 450

8. 780

Sample solution for number 1:

55%, 165

R = 5%  
B = 165  
P = ?

Using the formula:

$P / R = B$   
 $R = 165 / .55$   
B = 300

### Worksheet 11

1. 30

2. 22.5%

3. 375

4. 250

5. 9%

6. 25%

7. P 40 000

8. 150

### Worksheet 12

1. B = P 750  
R = 50%  
P = P 375

2. B = 456  
R = 85%  
P = 386

7. B = 56  
R = 25%  
P = 14

## Worksheet 13

Solutions:

$$\begin{array}{r}
 1. \quad \text{Step A} \quad \text{P } 875.95 \\
 \quad \quad \quad \quad \times \quad .20 \\
 \hline
 \text{P } 175.19 \quad (\text{discount})
 \end{array}$$

$$\begin{array}{r}
 1. \quad \text{Step B} \quad \text{P } 875.95 \\
 \quad \quad \quad \quad - 175.19 \\
 \hline
 \text{P } 700.76 \quad (\text{selling price})
 \end{array}$$

$$\begin{array}{r}
 2. \quad \text{Step A} \quad \text{P } 2\,545.00 \\
 \quad \quad \quad \quad \times \quad .25 \\
 \hline
 \text{P } 636.25 \quad (\text{discount})
 \end{array}$$

$$\begin{array}{r}
 2. \quad \text{Step B} \quad \text{P } 2\,545.00 \\
 \quad \quad \quad \quad - 636.25 \\
 \hline
 \text{P } 1\,908.75 \quad (\text{sale price})
 \end{array}$$

$$\begin{array}{r}
 3. \quad \text{Step A} \quad \text{P } 765.00 \\
 \quad \quad \quad \quad \times \quad .25 \\
 \hline
 \text{P } 306.38 \quad (\text{discount})
 \end{array}$$

$$\begin{array}{r}
 3. \quad \text{Step B} \quad \text{P } 765.95 \\
 \quad \quad \quad \quad - 306.25 \\
 \hline
 \text{P } 459.57 \quad (\text{selling price})
 \end{array}$$

## Worksheet 14

$$\begin{array}{r}
 1. \quad \text{P } 18\,865 \\
 \quad \quad \quad \times \quad .07 \\
 \hline
 \text{P } 1\,320.19 \quad (\text{commission})
 \end{array}$$

$$\begin{array}{r}
 2. \quad \text{Step A} \quad \text{P } 3\,000 \\
 \quad \quad \quad \times \quad .12 \\
 \hline
 \text{P } 360 \quad (\text{commission for sales up to P } 3\,000)
 \end{array}$$

$$\begin{array}{r}
 \text{Step B} \quad \text{P } 360 \\
 \quad \quad \quad \times \quad .4 \\
 \hline
 \text{P } 1\,440 \quad (\text{commission for sales up to P } 12\,000)
 \end{array}$$

$$\begin{array}{r}
 3. \quad \text{P } 18\,400 \\
 \quad \quad \quad \times \quad .15 \\
 \hline
 \text{P } 2\,760 \quad (\text{commission})
 \end{array}$$

Since for every P3 000, Susie receives a commission of 12%, so, for a sale of P 12 000, her commission is P 1 440.

## Worksheet 15

1. Step A

$$\begin{array}{r} P\ 3\ 000 \\ \times\ .14 \\ \hline P\ 420 \end{array} \quad \text{(interest for one year)}$$

Step B

$$\begin{array}{r} P\ 420 \\ \times\ 2 \\ \hline P\ 840 \end{array} \quad \text{(interest for 2 years)}$$

2. Step A

$$\begin{array}{r} P\ 8\ 500 \\ \times\ .12 \\ \hline P\ 1\ 020 \end{array} \quad \text{(interest for one year)}$$

Step B

$$\begin{array}{r} P\ 1\ 020 \\ \times\ 3 \\ \hline P\ 3\ 060 \end{array} \quad \text{(interest for 3 years)}$$

Step C

$$\begin{array}{r} P\ 8\ 500 \\ +\ 3\ 060 \\ \hline P\ 11\ 560 \end{array} \quad \text{(total amount to be paid)}$$

3. Step A

$$\begin{array}{r} P\ 300\ 500 \\ \times\ .15 \\ \hline P\ 45\ 075 \end{array} \quad \text{(interest for one year)}$$

Step B

$$\begin{array}{r} P\ 300\ 500 \\ +\ 45\ 075 \\ \hline P\ 345\ 575 \end{array}$$

## Worksheet 16

1. Step A

$$\begin{array}{r} P\ 15\ 000 \\ \times\ .12 \\ \hline P\ 1\ 800 \end{array} \quad \text{(interest for one year)}$$

Step B

$$\begin{array}{r} P\ 1\ 800 \\ \times\ 2 \\ \hline P\ 3\ 600 \end{array} \quad \text{(interest for 2 years)}$$

2. Step A

$$\begin{array}{r} P\ 675 \\ \times\ .16 \\ \hline P\ 108 \end{array} \quad \text{(discount)}$$

Step B

$$\begin{array}{r} P\ 675 \\ -\ 108 \\ \hline P\ 567 \end{array} \quad \text{(sale price)}$$

3.

$$\begin{array}{r} P\ 2\ 195 \\ \times\ .12 \\ \hline P\ 263.40 \end{array} \quad \text{(commission)}$$

4.

$$\begin{array}{r} P\ 50\ 500 \\ \times\ .057 \\ \hline P\ 2\ 878.50 \end{array} \quad \text{(interest for one year)}$$

## References

Department of Education, Queensland. "Percentage and Money". Years 1 to 10 Mathematics Sourcebook, 1989: 35-48

IMDC, DECS. "Percent". Mathematics in Everyday Life 6, 1996: 153-162

Misa, Estellita L. and Li, Bernardino Q. "Percent". Moving Ahead with Mathematics I, 1998: 47-61

Sagun, Priscilla C. de and Naz-Ulpina Jisela M. "Percent". Dynamic Math I, 1997: 54-68