# What's the problem? 

For Adults

## Who

## Like a Challenge

## Solving Word Problems

Materials compiled by
Evelyn Tregidgo
Aurora College, Hay River NT
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## WORD PROBLEMS

Word problems can be particularly difficult for some adults for the following reasons:

1. A language barrier; the student may speak and understand two languages; however, their comprehension skills may be undeveloped in each.
2. English language words specific to mathematics may need reinforcement.
3. Basic arithmetic concepts may need to be clarified.
4. Multiplication facts usually need reinforcement.
5. Prevailing views that word problems are 'hard'.

For the most part, students have been exposed to traditional word problems that consist of the given facts (numbers) and a question. This approach asks the student to determine how they will arrive at a solution using language specific clues with and without numbers

GOAL: to motivate adult students who are at the 110 Literacy level to learn how to solve basic math problems in a supportive atmosphere.

To facilitate motivation, these problems are best presented as 'brain teasers' or 'twisters', for a short duration at the beginning of each math class. Presenting math problems for 10 to 15 minutes alleviates preconceived notions that math problems are 'hard' and must be worked at laboriously. Therefore, only 2 or 3 questions were presented each day.

Secondly, students are more eager to attack word problems if short lessons are presented as an enjoyable activity. Lots of discussion, rapid calculating, and a flurry of opinion takes place. Students are motivated to bring their personal math problems to class. e.g. Buying a carpet; comparative shopping.

OBJECTIVE: the student will learn the basic mathematical concepts, the operations, and the key words that provide clues to the solution of word problems. The students will use these acquired skills to solve word problems in real life situations.

METHOD: throughout the semester, multiplication facts were reviewed daily using a myriad of methods to challenge retention and interest! Before the problems were introduced, addition, subtraction, multiplication, and division concepts were taught. Addition/subtraction and multiplication/division operations were taught as converse operations using pictures and drawings. Next, clue words were written on a large wall poster.

The questions in this package are arranged in order of difficulty beginning with one-step problems and ending with two-step problems. Additional reinforcement to identify factual information and the question asked is given are also included. The last page presents traditional one or two-step problems with numbers.

## SPECIFIC OUTCOMES

Using the ABE Math 110 checklist in the curriculum guide, the following outcomes are taught and / or reinforced:
11. Apply skills to solve one-step word problems within a real-life context. This outcome was a natural result of the course. Students not only presented real life scenarios in class, but they also brought their personal mathematical problems to class for a collective solution.
13. Check solutions to addition and subtraction problems using the inverse operation.
14. Justify the choice of method of addition and subtraction (multiplication and division, as well) using estimation strategies, mental math strategies, and manipulative.
17. Identify and use common metric units to perform simple measurements of length and mass.

1. Demonstrate the meaning of vocabulary words used to solve addition, subtraction, multiplication, and division problems.

The purpose of this package is to achieve this specific outcome.
12/15. Calculate answers to adding, subtracting, multiplying, and dividing problems by using estimation strategies and mental math strategies.

## GROUP ACTIVITIES

1. Students will complete a comparison shopping activity at the store in pairs. Each group will compare their findings.
2. After learning the concepts and attaining some proficiency, the students will make up their own problems by working in a group. Each group will present their problems to the collective whole.
3. Put names in a hat and have students draw questions on written cards.
4. Giving out silly prizes for correct answers worked.
5. Give each group an envelope containing a word problem. The students have to draw a picture that demonstrates how the problem should be solved.
6. Prepare a series of word problems with four possible answers. Using the format of the game show "Who Wants to be a Millionaire", the student will strive to earn $\$ 1,000,000$.

## WORD CLUES

| OPERATION | WORD CLUES | EXAMPLE |
| :---: | :---: | :---: |
| ADD | Altogether | Add: Jeff picked up 43 marbles, 73 sea shells, and 105 pins. How many things did he pick up altogether? |
|  | Total | What was the total number of things he picked up? |
|  | Sum | What is the sum of the items he picked up? |
|  | Plus / Is | 4 plus 4 is 8 |
|  | And | 2 and 2 are 4 |
|  | Both | What is the cost of both items |
|  | Combined | What is the total of all the entries after they are combined? |
| SUBTRACT | Left | How much money is left? |
|  | Remaining | How much money is remaining? |
|  | Less | How much less did she eat last week? |
|  | Less than | The large glass contains 6 ml of milk. The small glass contains 2 ml less than the large glass. How many ml does the small cup contain? |
|  | Difference between | What is the difference between 3 dollars and 2 dollars? |
|  | More | How many more people live in Hay River than in Fort Smith? |
|  | Increase | How much did the prices increase from last year? |
|  |  | Increase: This key word may surprise you. You might think that "increase" would mean to "add". But it doesn't. To find an increase, you have to subtract the old, lower size or amount from the |


| SUBTRACT <br> (Continued) | Go up / grow / rise <br> Decrease <br> Go down / reduce <br> Comparison: <br> Words that end in er: <br> Farther <br> Smaller <br> Larger, taller, older, wider, etc. | new, higher amount. The same goes for "go up", "grow", and "rise". <br> How much did the price decrease from last year? <br> Decrease: You may think that if "increase" means subtraction, then "decrease" would mean addition. But it doesn't. To find a decrease, you use exactly the same subtraction operation as you would for "increase". The same goes for "go down" and "reduce". <br> How much farther is it to Fred's house? <br> How much smaller is the new calculator? |
| :---: | :---: | :---: |
| MULTIPLY <br> Key words are often the same for adding and multiplying. <br> Add to find the total of different numbers. <br> Multiply to find the total of the same number many times | Altogether <br> Total <br> In all <br> Of <br> (Particularly when used with fractions and percent) <br> Product | Joey bought 7 lottery tickets every day for 5 days. How many tickets did he buy altogether? <br> What was the total number of tickets he bought? <br> What was the total number of tickets he bought in all? <br> Fractions: How many kilometers is $3 / 5$ of the distance? <br> Percent: What is $43 \%$ of the original \$ 600.00? <br> The product of 2 and 3 is 6. |


| DIVISION |  |  |
| :---: | :---: | :---: |
| When you | Each one | How many did each one get? |
| are parts or | Per | What is the price per litre? |
| sets. You find a total. | Share | Three people divided the cost of the pizza evenly. What was each person's share? |
| When you divide you start | Quotient / Divided by | The quotient of 12 divided by $6=6$. |
| You need to find the equal parts of the total. | One | Two litres of juice costs $\$ 2.20$. What is the cost of one litre? |
| ADD AND DIVIDE | Average | You drove 641 km on Tuesday, 924 km on Wednesday and $1,020 \mathrm{~km}$ on Thursday. What is the average number of km you drove each day? |
| DIVIDE | Average | My phone bill was $\$ 1,200$ for the year. What were my average monthly phone costs? |

## WHAT'S THE OPERATION?

Mark the correct answer for each question with a check mark:

1. Which clue word suggests the operation add?
a) Left
b) Altogether
c) Each
d) Of
2. Which clue word suggests the operation subtract?
a) Left
b) Altogether
c) Each
d) Of
3. Which clue word suggests the operation divide?
a) Left
b) Altogether
c) Each
d) Of
4. Which clue word suggests the operation mulitply?
a) Left
b) Altogether
c) Each
d) Of
5. What operation is suggested by this question: How many more does he have to do?
a) Addition
b) Subtraction
c) Multiplication
d) Division
6. What operation is suggested by this question: How much did each one cost?
a) Addition
b) Subtraction
c) Multiplication
d) Division

## WHAT'S THE OPERATION?

7. What operation is suggested by this statement and question: It took $3 / 4$ of the summer vacation to build the addition to the kitchen. How much time was that?
a) Addition
b) Subtraction
c) Multiplication
d) Division
8. What operation is suggested by this statement and question: Ron worked 16 hours every day for 6 straight days. How many hours was that altogether? (Be careful - remember that this key word can suggest two different operations. You have to read the whole problem to find out which one goes here.)
a) Addition
b) Subtraction
c) Multiplication
d) Division
9. What operation is suggested by this question: How much was Bonnie's salary increase?
a) Addition
b) Subtraction
c) Multiplication
d) Division
10. What operation is suggested by this statement and question: Sixty percent of the senior class did not come to the first dance. How many people came to the dance?
a) Addition
b) Subtraction
c) Multiplication
d) Division

## PROBLEMS WITH WORD CLUES

Write A (add), S (subtract), M (multiply), or D (divide) after each problem, to tell how you would work it if you knew the numbers.

1. How would you change nickels to cents?
2. How would you change dimes to nickels?
3. How do you change nickels to quarters?
4. How do you change yards to feet?
5. How do you change cents to dimes?
6. If you know the cost of one drum, how do you find the cost of several drums?
7. If you buy several different things, how do you find the total cost?
8. Joey knows his weight now. He also knows his weight last year. How can he find how much more he weighs now?
9. If you know how much money you spent at the Northern Store and also how much you had left after the Northern Store, how can you find how much you had at first?
10. Dave knows how much money he has now. He also knows how much it costs to buy a softball. How can he find how much money he will have left after he buys the ball?
11. If you know the ages of Ted and Agnes, how do you find the differences in their ages?

## PROBLEMS WITH WORD CLUES

Tell how to work each problem by writing $\mathrm{A}, \mathrm{S}, \mathrm{M}$, or D :

1. How do you find how much you save if you know how much you earn and how much you spend?
2. How do you find the weight of all the boys on a skidoo if you know the weight of each boy?
3. How do you find your share of the cost of a lunch, if you know the total cost and number of people who went to the lunch?
4. How do you find the number of dollars you can save in several weeks, if you know how many dollars you can save in one week?
5. How do you find the number of tickets you have sold if you know how many tickets you had to sell and how many tickets you have left?
6. If you know how much it costs to stay at Sandy Creek Camp for one week, how can you find how much it will cost to stay there for several weeks?
7. How do you find the cost of one ticket to the movies if you know the cost of several tickets?
8. How do you find the age of one of your friends if you know how many years older s/he is than you are?

## PROBLEMS WITH WORD CLUES

Tell how to work each problem by writing A, S, M, or D:

1. How do you find the cost of several dreamcatchers of the same kind if you know the cost of one dreamcatcher?
2. How do you find the number of stamps you have left if you know how many you had and how many you used to mail letters?
3. How do you find the cost of $1 / 2$ pound of nuts if you know the cost of one pound?
4. How do you find the cost of one pencil if you know the number of pencils you can get for a dollar?
5. How do you find the number of people at a game if you know how many people went in each gate?
6. How do you find how many of your dogs ran away if you know how many you had and how many there are now in the yard?
7. How do you find the differences between your weight and the weight of your brother?

## PROBLEMS WITH WORD CLUES

Write A (add), S (subtract), M (multiply), or D (divide) after each problem to tell how you would work it if you knew the necessary numbers:

1. How do you find the cost of several kilograms of meat if you know the cost of one kilogram?
2. How do you find your average score for a game if you know the total score you made and you know the number of games that you played?
3. How do you find the total number of miles you traveled on a vacation last summer if you know the number of miles you went by boat, the number of miles by car, and the number of miles by plane?
4. How do you find how many meters long your fish line is if you know how many centimeters long it is?
5. How do you find the cost of your food at Pine Camp if you know the cost of food for one week and the number of weeks you have stayed?
6. How do you find the number of kilometres per hour that your father drove his car yesterday, if you know the distance he drove and the number of hours it took?
7. How do you find the amount of money you have in the bank if you know how much you had in the bank last week, and how much money you put in the bank this week?
8. How do you find the number of pounds in a truckful of gravel if you know how many tons the truck holds and you know the number of pounds in a ton?
9. How do you find the average amount you earned each day last summer if you know the number of days you worked and the total amount you earned all summer?

## PROBLEMS WITH WORD CLUES

Write A (add), S (subtract), M (multiply), or D (divide) after each problem to tell how you would work it if you knew the necessary numbers:

1. Adam knows that one route to work is shorter than the second route. How much shorter is the first route to his workplace?
2. If you knew the cost of housing this year rose twice as much as last year's cost, how do you find the increase in the cost of housing?
3. The cost of building a bridge was much more than the original estimate. How much did the price increase from the original estimate?
4. If you know that the total number of voters last year was less than the total number of voters this year, how do you find the decrease in the number of voters?
5. How do you find the difference between the prices of a red sweater and a blue sweater if you know the price of each sweater?
$\overline{6 \text {. If } 1 / 2}$ of all the trucks inspected by the weigh scale failed the inspection, how many trucks failed?
6. If Elizabeth paid $10 \%$ of her wages in taxes, how much did she pay in taxes?
7. If you know how many stamps you have and how many stamps Tom has, how do you find how many more or less stamps you have than Tom?

## PROBLEMS WITH WORD CLUES

Write A (add), S (subtract), M (multiply), or D (divide) after each problem to tell how you would work it if you knew the necessary numbers:

1. How do you find the number of dishes of ice cream you can get from several quarts of ice cream, if you know how many dishes you can get from one quart of ice cream?
2. How do you find your share of the cost of a party, if you know the total cost of the party and the number of persons giving the party?
3. How do you find the difference between the number of kilometres your father drove his new car last week and the number he drove this week?
4. If you buy a hat, a belt, and some other things before you go to a summer camp, how do you find the combined cost?
5. How do you find the total weight of the boys on a sled, if you know the weight of each boy on the sled?
6. If you know how much you have to pay for a second-hand car, and you know how much four new tires for the car will cost, how do you find how much the car and the tires will cost altogether?
7. How do you find the cost of one apple if you know the cost of several apples?
8. How do you find how many sheets of paper there are in several pads if you know how many sheets there are in one pad?
9. How do you find the number of people who went to the carnival if you know how many were there each night?

## PROBLEMS WITH WORD CLUES

Write the word add, subtract, multiply, or divide on each line in the problem to tell how you would work it if you knew the necessary numbers?

1. If you know how many hours you have worked on each of several days, you
$\qquad$ and then $\qquad$ to find the average time you worked a day.
2. If you know the cost of each of several things you bought, you $\qquad$ to find the total cost and then $\qquad$ to find how much change you would get from a ten-dollar bill.
3. If you know the total amount you paid at a sale for a certain number of yards of cloth, you $\qquad$ to find the cost per yard. If you also know the regular price per yard at which the cloth sold before the sale, you $\qquad$ to find how much you saved on each yard.
4. If you know the number of yards of canvas you bought today and the number of yards of the same kind of burlap you bought last week, you $\qquad$ to find the total number of yards you got. If you know the price per yard, you
$\qquad$ to find the cost of all the canvas.
5. If you know how much you earn and how much you save each week, you
$\qquad$ to find how much you spend in one week. To find the amount you spend in a year, you $\qquad$ .
6. If you know the cost of a bicycle you buy on the installment plan and the amount of cash you pay when you buy it, you $\qquad$ to find the amount you still owe on it. If you know the amount of each monthly installment, you
$\qquad$ to find the number of months it will take to pay for the bicycle.
7. If you know the cost of running a car for a year and the number of kilometres traveled, you $\qquad$ to find the average cost per mile.
8. If you know the cost of an old boat and the amount you spent to repair it, you
$\qquad$ to find the total cost of the boat. If you also know the amount for which you sold the boat later, you $\qquad$ to find your profit on the sale.

## SELECT THE QUESTION AND THE GIVEN INFORMATION

You will find certain facts written under each problem. If any one of these facts is given in the problem, write $\mathbf{G}$ after it; if the fact is one that you must find, write $\mathbf{F}$ after it. Then work the problem at the right.

1. Bob wants a bicycle that costs $\$ 68.95$. He has saved $\$ 23.28$ for it. How much more must he save before he can buy the bicycle?

The amount of money Bob has saved
The amount more he must save
The cost of the bicycle
2. John is printing 150 tickets for a basketball game. Yesterday he printed 48 tickets. Today he printed 56. How many more does he need to print?

The number of tickets printed yesterday
The number of tickets not yet printed
The number to be made altogether $\qquad$
3. The team sold 141 tickets for the game. How many tickets were not sold? (see example 2) $\qquad$ . The team charged $\$ 3.00$ for a ticket. If all the tickets had been sold, how much more money would the team have collected?

The number of tickets sold
The cost of the unsold tickets
The number of unsold tickets

4. Joe picked 10 litres of berries. He sold all but 2 litres at $\$ 1.25$ a litre. How much did he get for the berries?

The price of each litre
The amount received for the berries
The number of litres picked
The number of litres kept

5. Ed bought some seeds for $\$ 10.80$ and some plant food for $\$ 6.95$. If he gave the clerk $\$ 18.00$, how much change did he get?

The amount of change Ed got
The cost of the seeds
The amount he gave the clerk
The cost of the plant food $\qquad$

## SELECT THE QUESTION AND THE GIVEN INFORMATION

You will find certain facts written under each problem. If any one of these facts is given in the problem, write $\mathbf{G}$ after it; if the fact is one that you must find, write $\mathbf{F}$ after it. Then work the problem at the right.

1. Tom wants to save $\$ 50.00$ this summer. So far he has saved $\$ 7.75$ each week. How much did he save in 5 weeks? How much more does he need to make $\$ 50.00$ ?

The amount he wants
The amount he still needs
The amount he saved each week
The amount he saved in 5 weeks
2. Mr. Smallgeese took 2 boys to the rodeo. He bought 3 tickets at $\$ 5.50$ each. How much did he pay for them?

The number of tickets bought
The amount paid for all the tickets
The amount paid for 1 ticket

3. Fred bought a box of chocolate bars for $\$ 12.00$. There are 24 bars in a box. He sold all the bars at $\$ .40$ each. How much did John make?

The amount of money John made
The cost of a box of bars
The amount he got for each bar
The number of bars in a box

4. Tom bought a $\$ 5.00$ bus ticket each time he rode a bus. He could have bought 6 tickets for $\$ 9.00$. How much would he have saved on 6 rides by buying 6 tickets at one time?

The cost of 6 tickets bought together
The amount he would have saved
The cost of a single ticket

## SELECT THE QUESTION AND THE GIVEN INFORMATION

Some two-step problems are given below. Each problem tells you information that you must use to work out the problem. This information is called given facts (G). Each problem also asks a question (Q), that you must finally answer. In working the first step of the problem a new fact must be found $(F)$, which is needed in working the second-step of the problem.

Each problem below has some facts under it. After each fact write $\mathbf{G}, \mathbf{Q}$, or $\mathbf{F}$ to tell which kind of fact it is. Then work the problem:

1. During his summer vacation of 10 weeks, Earl worked for $\$ 30.00$ a week. He put $1 / 3$ of his money in the savings bank. How much did Tom put in the bank?

The number of weeks Earl worked
The amount he earned all summer
The amount he earned in one week.
The amount of money Earl put in the bank

2. Mr. King picked 75 kilograms of peaches. He kept 8 kilograms and sold the rest for $\$ 2.00$ a kilogram. How much did Mr. King get for the peaches he sold?

The number of kilograms Mr. King sold
The selling price of one kg
The number of kilograms he kept
The number of kilograms he picked
The amount he got for the peaches he sold

3. Ramona had $\$ 38.43$ in the bank. She earned $\$ 15.72$ more and received $\$ 12.50$ for her birthday. In the summer she spent all he money for 31 days at a camp. How much, on the average, did it cost for her each day at the camp?

The number of days at camp
The cost of one day at camp
The total amount of money Ramona had
The amount of money Ramona earned
The amount she received for her birthday
The amount Ramona had in the bank


## SELECT THE QUESTION AND THE GIVEN INFORMATION

Some three-step problems are given below. Each problem contains certain given facts ( $\mathbf{G}$ ) that you use in working the problem. It also asks a question (Q) that you must finally answer. In working the first and second steps of the problem, new facts (F) must be found, which are needed in working the third step of the problem.

Each problem below has some facts written under it. After each fact write $\mathbf{G}, \mathbf{Q}$, or $\mathbf{F}$ to tell which kind of fact it is:

1. Mrs. Unka can buy a washing machine for cash by paying $\$ 725.00$ or on the installment plan by paying $\$ 125.00$ down and $\$ 60.00$ a month for 12 months. How much will she save by paying cash?

Cash cost of the machine Cost on installment plan Amount to be paid down Amount saved
Amount paid per month
Amount paid in 9 months $\qquad$
2. Mr. Hall bought 3 qt . oil at $\$ 1.80$ a quart and 7 gallons gasoline at $\$ .77$ a gallon. How much did the oil and gasoline cost?

Cost of all the gasoline
Cost of one 1 quart of oil Cost of oil and gasoline
Cost of 1 gallon of gasoline Number of gallons of gasoline Cost of all the oil $\qquad$
3. Peggy bought 3 yd. cloth at $\$ 3.98$ a yard and a spool of thread for $\$ 1.09$. How much change did she get from a twenty-dollar bill?

Amount of change she got Cost of the spool of thread Cost of all the cloth Amount Peggy spent
Number of yards of cloth
Cost of 1 yard of cloth $\qquad$

## SELECT THE QUESTION AND THE GIVEN INFORMATION

Some three-step problems are given below. Each problem contains certain given facts ( $\mathbf{G}$ ) that you use in working the problem. It also asks a question (Q) that you must finally answer. In working the first and second steps of the problem, new facts (F) must be found, which are needed in working the third step of the problem.

Each problem below has some facts written under it. After each fact write $\mathbf{G}, \mathbf{Q}$, or $\mathbf{F}$ to tell which kind of fact it is:

1. Mr. Lee earns $\$ 575.00$ a month. If he spent all he earned last year except $\$ 160.00$ that he gave his son and $\$ 500.00$ that he saved, how much did he spend?

Amount he gave his son
Amount earned last year
Amount earned in 1 month
Amount not spent
Amount he saved

2. A kitchen is 21 ft . long and 18 ft . wide. How much will it cost to cover the floor with linoleum at $\$ 6.25$ per square yard?

Width of the kitchen
Total cost of linoleum
Cost of 1 square yard
Area in square yards
Length of the kitchen
Area in square feet

3. Mr. Lee ran his light compact car 319.2 km on 9 litres of gasoline. Arthur, who has a heavier car, went 179.3 km on 11 litres. On the average, what is the difference between the numbers of km per litre that each car went?

Mr. Lee's average per litre Number of litres Arthur used Difference in km per litre Distance Mr. Lee drove
Arthur's average per litre Number of litres Mr. Lee used $\qquad$

## PROBLEMS WITH MISSING QUESTIONS

The following problems are not complete because no question has been asked. Finish each problem by writing on the line a question that can be answered by using the facts given. Then work the problem:

1. At the bookstore George bought a dictionary for $\$ 1.68$. To pay for it he gave the clerk a $\$ 5.00$ bill.

Question:
2. At a special sale Joe paid $\$ 5.35$ for a tennis racket that had been $\$ 6.25$ before the sale.

Question:
3. At the County Fair Mrs. Allen bought a jar of jam for $\$ .45$ and some homemade rolls for $\$ .50$. She paid for them with a dollar bill.

Question:
4. Mr. Jones ordered $21 / 2$ dozen tulip bulbs at the Garden Club flower shop. The bulbs were $\$ 3.00$ a dozen.

Question:
5. The food for a picnic cost $\$ 21.45$. There were 33 people at the picnic. They shared the cost equally.

Question:

## PROBLEMS WITH MISSING FACTS

In each of the following problems there is a missing fact which you must know before you can work the problem. On the line write some fact that you need to solve the problem. Then work the problem:

1. The Science Club had a picnic yesterday and it cost $\$ 25.35$. If they shared the expense equally, how much did each one pay?

Needed Fact: There were 39 people
2. George saved all the money he earned on Saturdays. He spent $\$ 6.50$ of his savings for a football. How much money did he have left then?

Needed fact: $\qquad$
3. Miss. Lane works in an office. She spends $3 / 4$ of her salary for room and board. How much does her room and board cost?

Needed fact: $\qquad$
4. Tom's mother is buying a radio set for $\$ 28.00$. If she is paying for it on the installment plan, how much does she pay each month?

Needed fact: $\qquad$
5. Mrs. White sent Allen to the store for 1 lb . of butter and 5 lb . of sugar. How much money did Allen pay for these things?

Needed fact: $\qquad$
6. Ben sold tickets for a baseball game. When he counted those he had left, there were 14. How many tickets did Ben have at first?

Needed fact: $\qquad$

## PROBLEMS WITH NUMBERS

After each problem tell how to work it by writing $A, S, M$, or $D$. If there are two steps, write the letter for each step. Then do the work at the right:

1. Last week when Fred was helping Mr. King he worked 2 hours on Thursday, 2 hours on Friday, and 5 hours on Saturday. If Mr. King paid Fred $\$ 7.25$ an hour, how much did Fred earn?
2. Jim saves $\$ 5.00$ from his salary each month. In how many weeks will he have $\$ 75.00$ ?
3. Tom and Ned had $\$ 7.86$ to divide equally. Ned spent $\$ .25$ of his share of the money. How much did Ned have left?
4. Ed made a bowling score of 215 last week. His score this week was 198. How much more did he make last week?
5. Last week Joe sold 28 papers on Wednesday, 36 papers on Thursday, 32 papers on Friday, and 51 papers on Saturday. How many papers did he sell altogether on these four days?
6. Two boys picked 5 pails of Saskatoons and sold them for $\$ 4.98$ each. They divided the money equally. How much did each boy get?
7. Ned had $\$ 8.49$ when he left home this morning. He paid $\$ 2.25$ for bus fares, $\$ 4.98$ for lunch, and $\$ .50$ for a newspaper. How much does he have left after paying for these things?

## REFERENCES

Tamarkin, K. (1983). Contemporary's Number Power. Chicago: Contemporary Books, Inc.

Tussing, A. Editor. (revised 1981). Word Problems with Whole Numbers. New York: New Readers Press.

Upton, C. (1965). Adult Adventures in Arithmetic. New York: American Book Company.

