



What is the Problem?

In this workbook you will learn how to solve problems. You will practice the problem solving process with easy problems (easy does not mean 'no thinking required' – you must use your brain to solve the problems --- easy or not).

Before you get started two things must occur before you can solve a problem. First, whenever you are presented with a problem you must *want* to solve it. If you do not want to solve a problem you will not put enough effort into finding a solution. Second, you must understand the problem before you can solve it. If you don't understand the problem you may find a solution, but it will probably be the solution to another problem.

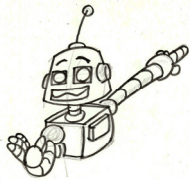
So, if you want to enhance your problem solving skills, decide that you want to solve the problems in this workbook and make sure you *understand* each problem before you try to solve it. Then relax. When you relax, you increase your ability to focus and concentrate. Have fun!

Make sure you understand each problem before you attempt to solve it. First read the problem. Do you understand it? How can you tell? You can tell because:

- You can confidently describe the problem to someone else so that they understand the problem.
- You can write the problem on paper and when you read it out loud it makes sense.

What you can do if you do not understand the problem:

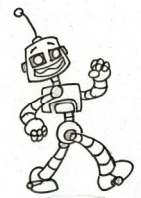
- Re-read the problem (as many times as you need to).
- If there are any words in the problem that you are unfamiliar with, look them up in the dictionary and write down their meaning as it appears in the dictionary.
- Get a picture in your mind of what the dictionary definition means and re-write the definition in your own words.
- Read the problem again.
- Can you confidently describe the problem to someone else?



After you read the problem get a picture in your mind of what the problem is asking you to do. Sometimes drawing a picture will help you understand the problem and *sometimes* it will help you solve it.

Use these steps to solve problems in this work book:

1. Relax
2. Read the problem
3. Write in your own words what the problem is asking you to do
4. List information that was given in the problem
5. List information in the problem that is not stated but understood
6. If you find you require more information to solve the problem, go on line/Ask an adult/find a resource to obtain the additional information
7. Once you have all of the information, you will be able to solve the problem



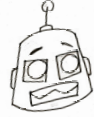
What is the Problem?

Step One: READ

The first exercise is a word problem. Read the problem.

Problem #1

Jo, JoMary and Mary Jo are on horses ready to race across a field. There is a mosquito on the neck of each rider. There are 3 fleas on the rump of each horse. How many legs are there altogether?



Step Two: DO YOU UNDERSTAND THE PROBLEM?

When you think you understand what the problem is asking you to do, write down, in your own words, what you think you are supposed to do. Do not start step three until you understand the problem. Take your time – relax and think.

20 Points

Write in your own
words what the
problem is asking
you to do

When you understand a problem it is easy to explain it to someone else. Make sure you understand a problem before you try to solve it.

Step Three: WHAT WAS GIVEN IN THE PROBLEM?

Once you understand the problem, write down all of the information that you can find in the problem that will help you solve it.

20 Points

Write information
given in the problem
that will help you
solve the problem

Step Four: WHAT CAN YOU DEDUCE FROM THE PROBLEM?

Sometimes there is implied information given in the problem. This is information that you have to figure out. Write that down also.

20 Points

Write what you
figured out from
what was given in
the problem

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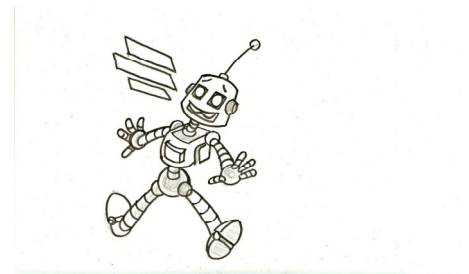
Step Five: OBTAIN ANY MISSING INFORMATION

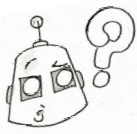
Do you have all of the information you need to solve the problem? Is there some information given in the problem that you don't understand? Is there some missing information? Write down questions that will get you the information you need to solve the problem. Find the appropriate resources to get the answer to your questions. Once you have all of the information, you will be able to solve the problem.

20 Points

*Write questions
that will help you
get more information
to solve the problem*

Draw a Picture of what the result looks like and use this space to solve the problem.





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PROBLEM REWORDED		
First, write in your own words what the problem is asking you to do.		
WHAT I KNOW (GIVEN)	WHAT HAS TO HAPPEN	THE SOLUTION
EXPLICIT	Seventh, list each step that has to occur to get from WHAT I KNOW to THE SOLUTION	Fifth, what is the solution
Second, write what was given in the problem that will help you solve the problem.		
IMPLICIT		
Third, write any info that you can deduce from what was given in the problem.		
WHAT ELSE DO I NEED TO KNOW		
Fourth, write any other info you need to know to solve the problem.		
WHAT THE SOLUTION LOOKS LIKE		
Sixth, write or draw what the solution looks like.		