

## **\*\*Problem Solving Math Homework Guidelines\*\***

Dear Parents,

Math homework this year will consist of four math problems each week. The homework will be handed out on Monday and is due at 8:00 a.m. on Monday of the following week. The homework also requires a parent signature. This can be you or any other adult at home or school. Make sure before you sign the homework that you do two things: check to be sure the work is complete and have your child explain at least one problem to you. Parent involvement is **important**. The problems will provide students the opportunity to think on a deeper level in order to problem solve math concepts we will have covered in class. Each problem requires the student to complete several steps in order to fully understand the concept of problem solving.

The first step, **Understand**. The students are required to read each problem two times. Then they should underline the question only. Next, they should put a box around any important words or numbers in the question that will be needed to solve the problem. Next, they go back to the rest of the problem and continue to box important words or numbers that will be useful in solving the problem. Lastly, they should cross out any extra information that may confuse them in solving the problem.

The second step, **Plan**. Students are required to write in words how they will solve the problem. The key here is to use words only and to explain step by step what you need to do in order to solve the problem. This seems to be the hardest section for the students. Basically, they are having to put their thought process or problem solving into words. They will also circle the operation they used to solve the problem. (+=sum, -=difference, x=product, ÷=quotient) ☺

The third step, **Solve**. Students are required to show their work to solve the problem in this box. They can draw a picture, graph, table, pattern, number line, computation, guess and check, etc. They should fill in the number answer. This is just the answer to the problem.

The fourth step, **Check**. In this box students will evaluate whether their answer makes sense. Most often, they will do the inverse operation to check their

computation but they may also write a fact family, draw a picture, or show another way to solve. They may also use words to describe why their answer is reasonable.

Students will turn in their homework by 8:00 a.m. on Monday. The teacher will check to make sure each student has a parent signature, fully completed the four problems, and turned in their math homework for the week. If the homework is not complete or is not turned in, the student will still be required to complete the work to receive their grade.

The students will have opportunities collaborate with their classmates on how they solved the given problems. Math problems can be solved many different ways. It is important for students to see that their peers may get the same answer but that they solved the problem differently. The collaboration time is important for students to be able to verbally explain to their peers how they think through, or problem solve, in order to solve a problem.

Attached you will find an example of a "Problem Solving" math homework problem with all the steps completed. We have been solving problems using this format each day in class. The sample is to show you, the parent, what is required for each of the four problems that will be assigned weekly. Each week the answers to the homework will be uploaded to the Third Grade page at [perry.mansfieldisd.org](http://perry.mansfieldisd.org). If your child would like to pull up the homework and check their answers to ensure a perfect score, that is okay with us! If they get stuck or need help, they are welcome to use this resource as well. We hope to make this an easy practice for you and your child.

If you have any questions regarding the math homework please, do not hesitate to contact your child's teacher. If your child needs extra help with homework, they may attend Homework Club from 7:30 to 7:55, Tuesday through Friday.

Sincerely,

*Brandie Horne & Erin Johnston*

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# Math Problem Solving Homework 2

Date: September 12-19, 2016

<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>1. On an island, there are <u>69 wild horses</u> and <u>82 tame horses</u>. In total, how many <u>horses are on the island?</u></p> <p>69 wild 82 tame ? total</p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, X, ÷)</p> <p>I will find the: <u>sum</u> difference product quotient</p> <p>by: <u>adding 69</u> <u>and 82.</u></p>	<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>2. To fill an order, the factory dyed <u>57 meters</u> of <u>silk yellow</u> and <u>94 meters</u> of <u>silk pink</u>. How many meters of <u>silk did it dye for that order?</u></p> <p>57m yellow 94m pink total?</p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, X, ÷)</p> <p>I will find the: <u>sum</u> difference product quotient</p> <p>by: <u>adding 57</u> <u>and 94.</u></p>
<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} + \\ 69 \\ + 82 \\ \hline 151 \end{array}$ <p>Number Answer: 151 horses</p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 01411 \\ \times 82 \\ - 82 \\ \hline 692 \end{array}$	<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} + \\ 57 \\ + 94 \\ \hline 151 \end{array}$ <p>Number Answer: 151 meters</p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 01411 \\ \times 94 \\ - 94 \\ \hline 574 \end{array}$

parent signature can be any adult

# Math Problem Solving Homework 2

Date: September 12-14, 2016

<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>3. In the winter, Mr. Conner's bee hives had <u>77</u> worker bees. Now that spring has come, the number of worker bees has <u>grown by 48</u>. How <u>many worker bees does he have now?</u></p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, x, ÷)</p> <p>I will find the: <small>(sum)</small> difference product quotient</p> <p>by: <u>adding 77</u> <u>and 48.</u></p>	<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>4. A large company is hosting a conference. So far, <u>64</u> people from the United States have signed up, as well as <u>36</u> people from other countries. What is the <u>total number of people who have signed up?</u></p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, x, ÷)</p> <p>I will find the: <small>(sum)</small> difference product quotient</p> <p>by: <u>adding 64</u> <u>and 36.</u></p>
<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} + \\ 77 \\ + 48 \\ \hline 125 \end{array}$ <p>Number Answer: <u>125 bees</u></p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 0 \ 1 \ 1 \ 5 \\ 77 \\ - 48 \\ \hline 77 \checkmark \end{array}$	<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} + \\ 64 \\ + 36 \\ \hline 100 \end{array}$ <p>Number Answer: <u>100 people</u></p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 0 \ 1 \ 0 \ 0 \\ 64 \\ - 36 \\ \hline 64 \checkmark \end{array}$

# Math Problem Solving Homework 3

Date: September 19-26, 2016

<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>1. Ivan is putting books in his bookcase. He has already put 74 books in the bookcase but he has 222 books. How many more books does he have to put in the bookcase?</p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, ×, ÷)</p> <p>I will find the: <u>difference</u> product quotient</p> <p>by: <u>Subtracting</u> 74 from 222.</p>	<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>2. Sandy picked 47 apples. Keith picked 28 apples. Tim picked 76 apples. How many apples were picked in all?</p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, ×, ÷)</p> <p>I will find the: <u>sum</u> difference product quotient</p> <p>by: <u>Adding</u> 47, 28, and 76</p>
<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} 222 \\ - 74 \\ \hline 148 \end{array}$ <p>Number Answer: 148 books</p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} + 148 \\ + 74 \\ \hline 222 \checkmark \end{array}$	<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} + 47 \\ + 28 \\ + 76 \\ \hline 151 \end{array}$ <p>Number Answer: 151 apples</p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} + 47 \\ + 28 \\ \hline 75 \\ + 76 \\ \hline 151 \checkmark \end{array}$

Parent Signature \_\_\_\_\_

# Math Problem Solving Homework 3

Date: September 19-26, 2016

<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>3. There are <u>24</u> oak trees currently in the park. Today, workers will plant <u>37</u> more oak trees and <u><del>48</del> 14</u> pine trees. <u>How many oak trees will be in the park?</u></p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, x, ÷)</p> <p>I will find the: sum/difference product quotient by: <u>adding</u> <u>24 and 37.</u></p>	<p><b>Understand</b> Read, Re-read, Identify important information</p> <p>4. Mike had <u>46</u> dimes in his bank. He spent <u>13</u> of his dimes and <u>16</u> pennies. <u>How many dimes does he have now?</u></p>	<p><b>Plan</b> What strategy will you use? Are there multiple steps? (+, -, x, ÷)</p> <p>I will find the: sum/difference product quotient by: <u>subtracting</u> <u>13 from 46.</u></p>
<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} 24 \\ + 37 \\ \hline 61 \end{array}$ <p>Number Answer: <u>61 oak trees</u></p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 511 \\ \cancel{60} \\ - 37 \\ \hline 24 \checkmark \end{array}$	<p><b>Solve</b> Solve the problem. SHOW YOUR WORK!</p> $\begin{array}{r} 46 \\ - 13 \\ \hline 33 \checkmark \end{array}$ <p>Number Answer: <u>33 dimes</u></p>	<p><b>Check</b> Does your answer make sense? Justify your answer.</p> $\begin{array}{r} 33 \\ + 13 \\ \hline 46 \checkmark \end{array}$