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Modified In-School Off-School Approach Modules (MISOSA)  
**Distance Education for Elementary Schools**  
**SELF-INSTRUCTIONAL MATERIALS**



**TWO-STEP WORD PROBLEMS  
INVOLVING ADDITION AND  
SUBTRACTION OF DECIMALS**



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## TWO-STEP WORD PROBLEMS INVOLVING ADDITION AND SUBTRACTION OF DECIMALS

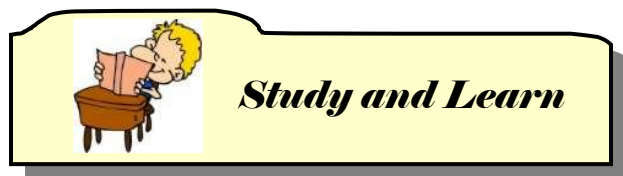
**Objective:** Solve two-step word problems involving addition and subtraction of decimals including problems that involve money



Study the table then answer the questions that follow.

TOY SALE	
Big .....	₱99.75
Medium-sized....	₱65.50
Small.....	₱24.75

- 1) Anne bought 1 big toy and 1 small toy. How much did she spend?
- 2) Mercedes bought 2 small toys and a big toy. How much did she pay?
- 3) Norie bought a toy of each size. How much did she pay for the 3 toys?



Ann attended a “Book Fair” and bought 3 books. The books were marked ₱149.75, ₱88.50 and ₱129.30. She paid these with her ₱500-bill. How much was her change?

What did Ann buy?  
Do you enjoy buying books? Why?  
In what ways are books helpful?





Let's now solve the problem following the steps below.

**1. Understand the problem.**

- What is asked?

*The change of Ann's ₱500-bill*

- What are given?

*₱149.75, ₱88.50, ₱129.30, ₱500-bill*

- What is the hidden question?

*The total amount of purchases made*

**2. Plan on how to solve the problem.**

What are the processes involved?      *Addition and subtraction*

What shall we add?      *Add the costs of the 3 books*

What shall we subtract?      *Subtract the total cost of the 3 books from the ₱500-bill.*

**3. Solve and look back.**

For the amount of the 3 books:

$$\begin{array}{r} 121 \\ \text{₱}149.75 \\ 88.50 \\ + 129.30 \\ \hline \text{₱}367.55 \end{array}$$

For the change received:

$$\begin{array}{r} 499\ 910 \\ \text{₱}500.00 \\ - 367.55 \\ \hline \text{₱}132.45 \end{array}$$

Ann received a change of ₱132.45.

Let's try solving another word problem.

Father bought 15.5 litres of gasoline for his car. He consumed 3.5 litres on Monday and 4.75 litres on Tuesday. How many litres of gasoline was left?





Let's analyze and solve the problem.

- 1) What is asked?

*The amount of gasoline left*

- 2) What are the given facts?

*15.5 litres, 3.5 litres and 4.75 litres*

- 3) What is the hidden question?

*The amount of gasoline consumed for 2 days.*

- 4) What shall we do to solve the problem?

*Add the amount of gasoline consumed in 2 days then subtract this from 15.5 litres of gasoline.*

Here's the solution:

For the amount of gasoline  
consumed in 2 days

$$\begin{array}{r} 3.50 \\ + 4.75 \\ \hline 8.25 \\ \text{litres} \end{array}$$

To find the amount of gasoline left:

$$\begin{array}{r} 15.50 \\ - 8.25 \\ \hline 7.25 \\ \text{litres} \end{array}$$

7.25 litres of gasoline was left.



Here are some more word problems. Try to solve them.

- 1) The perimeter of a triangle is 53.9 cm. If 2 sides measure 20.5 cm and 15.2 cm, what will be the length of the 3<sup>rd</sup> side?





- 2) Joanne spent 3.5 hours studying her lessons. She spent 1.25 hours studying Science, 0.25 hour for English and the rest for Math. How long did she spend studying Math?
- 3) Aling Annie has ₱200 in her purse. She went to the market and spent ₱27.50 for vegetables, ₱120 for pork and ₱35.50 for fruits. How much money did she have left?
- 4) Mang Fred harvested 3 baskets of guavas with the following weights: 26.2 kg, 34.7 kg, and 31.5 kg. If he sold 55.75 kg in all, how many kilograms of guavas did he have left?



### *Wrap Up*

In solving two-step word problems, follow the steps below:

- Understand the problem – take note of the hidden question.
- Plan how you will solve it.
- Solve and look back.



### *On Your Own*

Read and solve the word problems.

- 1) Michaela prepared 12.5 litres of buko juice. She was able to sell 6.25 litres in the morning and 4.5 litres in the afternoon. How many litres of buko juice was left at the end of the day?
- 2) Claudine bought some materials needed for her project. She bought glue for ₱31.50, a pair of scissors for ₱25.75, a red cartolina for ₱4.75 and art papers for ₱12.50. If she gave the saleslady a ₱100-bill, how much change did she receive?





- 3) A blouse pattern requires 1.25 metres of cloth and a pair of pants requires 1.5 metres. If the dressmaker has 5 metres of cloth available, how many metres of cloth will be left?
- 4) Mercedes joined a dance presentation for the “Buwan ng Wika.” She bought a kimona costing ₱69.75 and a floral skirt for ₱85.25 for her costume. If mother gave her ₱200 for her costume, how much change did she return to her mother?
- 5) In Brgy. Pinagkaisahan, 54.5 percent are Catholic and 28.4 percent are Iglesia ni Kristo. What percent are neither Catholic nor Iglesia ni Kristo?

Check your answer with the answer key.

If you get...

- 4-5 Excellent! You may now proceed to the next lesson.
- 3 You need to review the processes you missed.
- 0-2 You need to repeat the whole process. Ask your teacher or elder to help you.





**Key to Correction**  
**2-STEP WORD PROBLEMS INVOLVING ADDITION AND SUBTRACTION OF DECIMALS**

REVIEW

- 1) ₱124.50
- 2) ₱149.25
- 3) ₱190.00

TRY THESE

- 1) 18.2 cm
- 2) 2 hours
- 3) ₱17.00
- 4) 36.65 kilograms

ON YOUR OWN

- 1) 1.75 litres of buko juice
- 2) ₱25.50
- 3) 2.25 metres of cloth
- 4) ₱45.00
- 5) 17.1%

