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



**ADDITION AND SUBTRAC-
TION OF DECIMALS IN THE
THOUSANDTHS PLACE
WITH REGROUPING**



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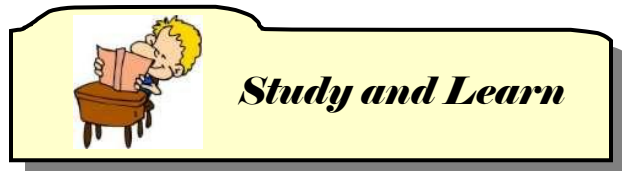
ADDITION AND SUBTRACTION OF DECIMALS IN THE THOUSANDTHS PLACE WITH REGROUPING

Objective: Add and subtract decimals in the thousandths place with regrouping

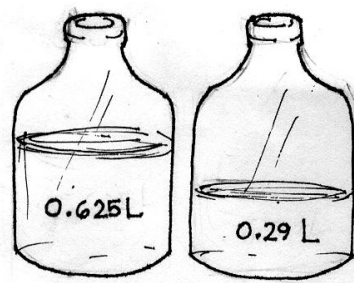


Do as indicated.

- 1) $0.278 + 0.32 + 0.101$
- 2) $0.834 - 0.212$
- 3) $0.431 + 0.425 + 0.14$
- 4) $0.674 - 0.313$
- 5) $0.352 + 0.213 + 0.134$



There are 2 bottles of milk in the refrigerator. If we are to combine the contents of the 2 bottles in a container, how much milk will there be in all?



To find the total amount of milk in the 2 bottles, we add the 2 amounts. We add $0.625 + 0.29$.

Let's solve this step by step.

- 1** Write the numbers in a column. Make sure to align the decimal points. Use a placeholder when needed.

$$\begin{array}{r} 0.625 \\ + 0.290 \\ \hline \end{array}$$





2 Subtract as you would subtract whole numbers. Regroup if necessary.

$$\begin{array}{r} 0.625 \\ + 0.290 \\ \hline 0.915 \end{array}$$

3 Place the decimal point in the sum. Align this with the decimal points of the addends.

$$\begin{array}{r} 0.625 \\ + 0.290 \\ \hline 0.915 \end{array}$$

The total amount of milk in the 2 bottles is 0.915 litres.

Let's have some more examples.

1) $0.934 + 0.38 = n$

$$\begin{array}{r} 0.934 \\ + 0.380 \\ \hline \end{array}$$

We place 0 as a place holder.

$$\begin{array}{r} 0.934 \\ + 0.380 \\ \hline 1.314 \end{array}$$

Place the decimal point exactly below the decimal points of the addends.

2) $0.562 + 0.237 + 0.36 = n$

$$\begin{array}{r} 0.562 \\ 0.237 \\ + 0.360 \\ \hline 1.159 \end{array}$$

Use 0 as placeholder.

Look at the 2 bottles of milk again.

How much milk does bottle A contain?

How about bottle B?

How much more milk than bottle B does bottle A contain?

To solve this, we subtract the amount of milk in bottle B from that of bottle A. Thus we subtract 0.29 from 0.625.

Let's solve.

1 Write the numbers in a column. Make sure to align the decimal points. Use a placeholder when needed.

$$\begin{array}{r} 0.625 \\ - 0.290 \\ \hline \end{array}$$




2 Subtract as you would subtract whole numbers. Regroup if necessary.

$$\begin{array}{r} ^5 ^{12} \\ 0.\cancel{6}25 \\ - 0.290 \\ \hline 0.335 \end{array}$$

3 Place the decimal point exactly below the other decimal points.

$$\begin{array}{r} ^5 ^{12} \\ 0.\cancel{6}25 \\ - 0.290 \\ \hline 0.335 \end{array}$$

Bottle A has 0.335 litres more milk than bottle B.

Below are other examples for you to study.

1) $0.79 - 0.365 = n$

$$\begin{array}{r} 0.790 \quad \text{Use 0 as placeholder} \\ - 0.365 \\ \hline 0.425 \end{array}$$

2) $0.634 - 0.27$

$$\begin{array}{r} 0.634 \\ - 0.270 \quad \text{Use 0 as placeholder} \\ \hline 0.364 \end{array}$$











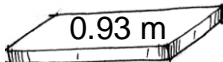
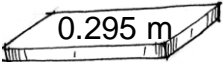
A. Find the sums by adding across, down and diagonally.

	0.45	0.432	0.38	-	<input type="text"/>
	0.065	0.361	0.18	-	<input type="text"/>
	0.23	0.349	0.245	-	<input type="text"/>





B. Subtract. Look for the difference in Column B.

	A	B	
1)	 0.796 L	 0.248 L	a. 0.142
2)	 0.532 kg	 0.39 kg	b. 0.057
3)	 0.823 m	 0.546 m	c. 0.635
4)	 0.306 kg	 0.249 kg	d. 0.548
5)	 0.93 m	 0.295 m	e. 0.277



Wrap Up

In adding/subtracting decimals with regrouping we...

- write the decimals in a column, aligning the decimal points. Use 0 as place holder when needed.
- add/subtract as you would add/subtract whole numbers. Regroup if necessary.
- place the decimal point in the result aligned with the other decimal points.



Find the sum or difference.

1)
$$\begin{array}{r} 0.657 \\ + 0.28 \\ \hline \end{array}$$

6) $0.342 + 0.39$

2)
$$\begin{array}{r} 0.593 \\ - 0.216 \\ \hline \end{array}$$

7) $0.257 + 0.369 + 0.27$

3)
$$\begin{array}{r} 0.832 \\ + 0.049 \\ \hline \end{array}$$

8) $0.935 - 0.287$

4)
$$\begin{array}{r} 0.433 \\ - 0.129 \\ \hline \end{array}$$

9) $0.27 + 0.394 + 0.421$

5)
$$\begin{array}{r} 0.306 \\ + 0.118 \\ \hline \end{array}$$

10) $0.748 - 0.499$

Check your answer with the answer key.

If you get...

8-10 Excellent! You may now proceed to the next lesson.

5-7 You need to review the processes you missed.

0-4 You need to repeat the whole process. Ask your teacher or elder to help you.





Key to Correction

ADDITION AND SUBTRACTION OF DECIMALS IN THE THOUSANDTHS PLACE WITH REGROUPING

REVIEW

- 1) 0.699
- 2) 0.622
- 3) 0.996
- 4) 0.361
- 5) 0.699

TRY THESE

A.

	0.45	0.432	0.38	-	1.262
	0.065	0.361	0.18	-	0.606
	0.23	0.349	0.245	-	0.824

Below the table, five circles contain the results of the additions: 0.971, 0.745, 1.142, 0.805, and 1.056. Vertical lines connect the circles to the corresponding columns of the table: 0.971 to the first column, 0.745 to the second, 1.142 to the third, 0.805 to the fourth, and 1.056 to the fifth.

B.

- 1) d
- 2) a
- 3) e
- 4) b
- 5) c

ON YOUR OWN

- 1) 0.937
- 2) 0.377
- 3) 0.881
- 4) 0.304
- 5) 0.924
- 6) 0.732
- 7) 0.896
- 8) 0.648
- 9) 1.085
- 10) 0.249

