

Lesson 5: Subtraction of Decimals

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There are 2 ways to Rewrite
as Addition.

↳ 2 ways

Procedure 1: Evaluating Adjacent Signs

ex. $4.01 - (-12.892)$

$$4.01 + 12.892$$

$$\begin{array}{r} 4.010 \\ + 12.892 \\ \hline 16.902 \end{array}$$

Procedure 1 from L4

↳ addition of
decimals with
same signs

+ +

or

- -

ex. $-24.32 - (-12.22)$

$$-24.32 + 12.22$$

Procedure 2 from L4

↳ addition of
decimals with
different signs

Procedure 2: Expanding Signs

I give you \$20 +
 pay for a \$18.75 meal.
 How much change do you
 owe me?

$$20 - 18.75$$

$$20 + (-18.75)$$

Evaluate
 Adjacent signs

→

$$+ + = +$$

$$- - = +$$

$$+ - = -$$

Procedure 2: addition of different signs from L4

ex:

$$-16.40 - 2.10$$

$$-16.40 + (-2.10)$$

$$\begin{array}{r} 16.40 \\ 2.10 \\ + \\ \hline 18.50 \end{array}$$

Final answer
 -18.50

Procedure 2: addition of decimals w same signs

law of signs for addition

$$+ + = +$$

$$- - = -$$

$$+ - = \text{same as "bigger"}$$

$$0.165 - 0.18$$

$$0.165 + (-0.18)$$

$$\begin{array}{r} 0.1\overset{?}{\cancel{8}}0 \\ 0.165 \\ \hline 0.015 \end{array} \rightarrow \text{final answer: } -0.015$$

ex

$$0.07 - 0.201$$
$$0.07 + (-0.201)$$
$$\begin{array}{r} 0.201 \\ 0.070 \\ \hline 0.131 \end{array}$$

-0.131

ex

$$3.502 - 2.7534$$
$$3.502 + (-2.7534)$$
$$\begin{array}{r} 3.502 \\ 2.7534 \\ \hline 0.7486 \end{array}$$

positive!

A Note about Word Questions

Involving : Difference

Distance
between
etc.

$$d = x_2 - x_1 \quad \rightarrow \quad x_2 \text{ is bigger \# , so final answer is positive}$$

$$d = |x_2 - x_1| \quad \rightarrow \quad | | \text{ absolute value which final answer positive.}$$

New: differential:

$$d = x_2 - x_1 \quad \rightarrow \quad \text{where } x_2 \text{ is 2nd \# and if final answer is negative that means there's a decrease from } x_1 \text{ to } x_2$$

Read pg 5.4 - 5.6