

Chapter 5 Section 2 Add, Subtract Decimals

Similar to addition, subtraction of whole numbers.

Add: 2.34 and 5.25

Change to mixed fractions and add

$$2.34 + 5.25$$

$$2\frac{34}{100} + 5\frac{25}{100}$$

$$7\frac{59}{100}$$

Another way is to line the decimal numbers on their decimal points and add vertically

$$\begin{array}{r} 2.34 \\ + 5.25 \\ \hline 7.59 \end{array}$$

Try: add 3.125 and 4.814

add: 2.864 + 3.029

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Observation: Adding zeros to the end of the fractional part of a decimal number does not change its value. Similarly, deleting trailing zeros from the end of a decimal number does not change its value.

7.25 and 7.2500 are identical

$$7.2500$$

$$7\frac{2500}{10000} \quad \text{reduce}$$

$$7\frac{25}{100}$$

$$7.25$$

Add: 7.5 and 12.23

Arrange the numbers in vertical format. Align their decimal points in a column and add trailing zero to acquire the same number of decimal places in each number.

$$\begin{array}{r} 7.50 \\ + 12.23 \\ \hline 19.73 \end{array}$$

Try: Find the sum: 12.2 + 5.352 + 22.44

Subtracting Decimals

Similar procedure to addition of decimal numbers.

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- 1) Place the numbers in vertical format, aligning the decimal points.
- 2) Subtract the numbers as if they were whole numbers.
- 3) Place the decimal point in the answer in the same column as the decimal points above it.

Subtract: 12.23 from 33.57

$$\begin{array}{r} 33.57 \\ - 12.23 \\ \hline 21.34 \end{array}$$

Try:

a) $58.76 - 38.95$

b) $13.3 - 8.572$

Signed Decimal numbers

If it looks difficult, make it simple.

a) $-3.2 + (-18.95)$

b) $-3 + 2.24$

c) $-8.567 - (-12.3)$

d) $-11.2 - (-8.45 + 2.7)$

e) $-12.3 - (-4.6 - (-2.84))$