CCSS • 7.NS.1

Adding and Subtracting Decimals

Name: _____	Date: _____	Score: _____ / 17

If you can add and subtract whole numbers, you can do the same with decimals—the only extra step is lining up the decimal points first! Keeping tenths under tenths and hundredths under hundredths makes sure every digit is in its proper column. A helpful trick: pad the shorter number with trailing zeros so every place-value slot is filled. Then compute just as you normally would and bring the decimal point straight down into your answer.

Key Concepts & Quick Review

Steps: **1.** Line up decimal points vertically. **2.** Add trailing zeros to match decimal places. **3.** Add or subtract as whole numbers; bring the decimal point straight down.

Sign rules: same signs $\rightarrow$ add absolute values, keep sign; different signs $\rightarrow$ subtract absolute values, keep sign of the larger.

Examples

① Find $7.08 - 3.6$.

Think It Through: The most important step with decimals is lining up the decimal points. Rewrite 3.6 as 3.60 so both numbers have the same number of places. Then subtract just like whole numbers, working from right to left. You need to borrow in the tenths place, which turns $0 - 6$ into $10 - 6 = 4$. Bring the decimal point straight down, and the result is 3.48. If decimals are not lined up first, the place values get mixed up.

Answer: 3.48

② A student paid $\$12.75$ for lunch and $\$3.40$ for a snack. How much did the student spend in total? What change would the student receive from a $\$20.00$ bill?

Think It Through: First add the two costs: $12.75 + 3.40 = 16.15$. That is the total amount spent. Next subtract from the \$20.00 bill: $20.00 - 16.15 = 3.85$. So the student gets \$3.85 in change. In money problems, writing the zeros is helpful because 20.00 lines up clearly with 16.15 and makes the borrowing easier to track.

Answer: *$\$16.15$ spent; $\$3.85$ change*

Practice Problems

Add or subtract each decimal expression.

1. $3.7 + 2.45 =$ _____

2. $8.02 - 3.7 =$ _____

3. $5.6 + 3.87 =$ _____

4. $12.05 - 7.8 =$ _____

5. $0.75 + 0.625 =$ _____

6. $4.3 + (-2.15) =$ _____

7. $-3.8 + 1.45 =$ _____

8. $-5.6 - (-2.35) =$ _____

9. $7.008 + 2.94 =$ _____

10. $10.5 - 3.875 =$ _____

11. $-4.72 + (-3.08) =$ _____

12. $6.4 - (-1.95) =$ _____

13. $0.005 + 3.99 =$ _____

14. $15.3 - 8.75 =$ _____

15. $-7.2 + 4.85 =$ _____

Study Tips

- Lining up decimal points ensures that tenths add to tenths, hundredths to hundredths — never skip this step.
- Adding trailing zeros never changes the value: $3.6 = 3.60 = 3.600$.
- For negative decimals, apply Chapter 1 sign rules to the numbers before computing, then find the absolute value result.

Word Problems

16. Marcus is tracking his bank account balance. He starts the week with $\$47.85$. On Monday he deposits $\$32.50$, on Wednesday he spends $\$58.20$ on supplies, and on Friday he earns $\$15.75$ doing yard work. Write an expression using decimals to find his end-of-week balance, and evaluate it. Is his balance positive or negative, and what does that mean? _____

17. A science experiment requires three liquid measurements: $0.375\,L$, $1.08\,L$, and $-0.6\,L$ (liquid removed from a container). Find the total net liquid in the container after all three actions. If the container's maximum capacity is 1.2 L, by how much does the net liquid exceed or fall short of capacity? _____

Answer Keys

1) 6.15
2) 4.32
3) 9.47
4) 4.25
5) 1.375
6) 2.15
7) -2.35
8) -3.25
9) 9.948
10) 6.625
11) -7.8
12) 8.35
13) 3.995
14) 6.55
15) -2.35
16) $37.90; positive balance
17) Net $0.855\ L$; short by $0.345\ L$

Step-by-Step Explanations

Strategy: For Adding and Subtracting Decimals, keep place value under control and estimate before calculating so the decimal point lands in a reasonable place. Aligning decimal points is the main habit that keeps this work dependable.

Practice 1: $3.7 + 2.45 =$ **Answer:** 6.15
For the first sample, line up decimal points so each place value combines with the matching place value.

Practice 15: $-7.2 + 4.85 =$ **Answer:** -2.35
Late in the set, line up decimal points so each place value combines with the matching place value.

Word-problem notes:

16. Answer: $47.85 + 32.50 - 58.20 + 15.75 = \$37.90$; positive — he has money in the account.
Follow the transactions in order. Start with 47.85, then add the deposit to get 80.35. Next subtract the money spent: $80.35 - 58.20 = 22.15$. Finally add the yard work earnings: $22.15 + 15.75 = 37.90$. The final balance is positive, which means Marcus still has money in the account. Writing the intermediate balances is a smart way to avoid losing track in multi-step problems.

17. Answer: Net: $0.375 + 1.08 - 0.6 = 0.855\ L$; falls short by $1.2 - 0.855 = 0.345\ L$.
Add the liquids that go in first: $0.375 + 1.08 = 1.455$ liters. Then account for the liquid removed by subtracting 0.6, which gives $1.455 - 0.6 = 0.855$ liters. Now compare that to the container's capacity of 1.2 liters. Since $0.855 < 1.2$, the container is not full. It falls short by $1.2 - 0.855 = 0.345$ liter. The negative sign in the problem tells us that amount is being taken out, not added.

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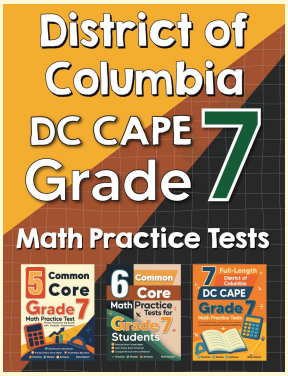

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