Whole Numbers and Decimals

Lesson 3 Adding Decimals

Standards 6.NS.B.3

Learning target I can add decimals by aligning equal place values.

Materials Place-value chart, graph paper for long division, pencils.

Lesson Flow 50 Minutes

0–5 Activate prior knowledge. Read the learning target. Ask students what they already know about adding decimals. Use a quick model or estimate to make their starting ideas visible.

5–17 Teach and model. Line up decimal points so tenths are under tenths and hundredths under hundredths. Add zeros if helpful. Add from right to left, regroup, and bring the decimal point straight down. Work through the two examples on the attached instruction page. Have students name the first step before showing it.

17–22 Guided practice. Revisit worked Example 2 with its solution covered. Students propose the next step and explain why it is valid; uncover and compare with the worked solution.

22–45 Independent classwork. Assign the attached 10 questions in order. Check items 1–3 for entry-level understanding, 4–6 for connected procedures, 7–8 for representation and explanation, and 9–10 for application or justification. Ask students to use the instruction-page notes area or extra grids for longer work.

45–50 Check understanding. Use classwork question 10 as an exit discussion: A runner walks 5.45 km in the morning and 0.61 km later. What is the total distance? Compare the result with the answer key and ask a student to defend the method.

Support and Extension

Support Model item 1 together with the listed tools, then have students attempt item 2 independently. Watch decimal place alignment, quotient zero digits, and the difference between GCF and LCM.

Extension Ask students to solve a final item another way, draw a second representation, or create a related problem with a checked answer.

Next step Record which students can explain the target independently. Begin the next teaching session with a brief correction for any recurring error.

Name _____ Date _____

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Learn and Discuss

Line up decimal points so tenths are under tenths and hundredths under hundredths. Add zeros if helpful. Add from right to left, regroup, and bring the decimal point straight down.

Example 1 Use the standard algorithm: 19.1 + 2.6. Show your regrouping or division steps.
Solution 21.7. Align decimal points; 19.1 + 2.6 = 21.7.
Example 2 Use the standard algorithm: 6.2 + 0.4. Show your regrouping or division steps.
Solution 6.6. Align decimal points; 6.2 + 0.4 = 6.6.

Classwork Show Your Work

Complete the 10 problems on the following page. Refer to the examples, draw models, and check your results.

My Notes or Second Method

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Name _____ Show calculations, models, and units.

1. Use the standard algorithm: 76.1 + 4.8. Show your regrouping or division steps.

2. Use the standard algorithm: 63.1 + 4.4. Show your regrouping or division steps.

3. Use the standard algorithm: 82.5 + 7.1. Show your regrouping or division steps.

4. Use the standard algorithm: 3 + 4.3. Show your regrouping or division steps.

5. Use the standard algorithm: 5.86 + 3.7. Show your regrouping or division steps.

6. Use the standard algorithm: 7.01 + 8.8. Show your regrouping or division steps.

7. Use the standard algorithm: 8.94 + 0.69. Show your regrouping or division steps.

8. Use the standard algorithm: 6.68 + 0.52. Show your regrouping or division steps.

9. A runner walks 8.36 km in the morning and 0.82 km later. What is the total distance?

10. A runner walks 5.45 km in the morning and 0.61 km later. What is the total distance?

Adding Decimals

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1. 80.9
Reasoning Align decimal points; 76.1 + 4.8 = 80.9.

2. 67.5
Reasoning Align decimal points; 63.1 + 4.4 = 67.5.

3. 89.6
Reasoning Align decimal points; 82.5 + 7.1 = 89.6.

4. 7.3
Reasoning Align decimal points; 3 + 4.3 = 7.3.

5. 9.56
Reasoning Align decimal points; 5.86 + 3.7 = 9.56.

6. 15.81
Reasoning Align decimal points; 7.01 + 8.8 = 15.81.

7. 9.63
Reasoning Align decimal points; 8.94 + 0.69 = 9.63.

8. 7.2
Reasoning Align decimal points; 6.68 + 0.52 = 7.2.

9. 9.18 km
Reasoning Align decimal points; 8.36 + 0.82 = 9.18.

10. 6.06 km
Reasoning Align decimal points; 5.45 + 0.61 = 6.06.