LESSON MAKER PRO

Decimal Detective

Estimate and solve decimal addition and subtraction.

GRADE 4 · 4.CE.4

4.CE.4 "The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction of decimals through the thousandths, with and without models..."

NAME _____ DATE _____

LINE UP THE POINTS

Write decimals so the decimal points are lined up. Add or subtract by place value, and use zeros as placeholders when needed. Estimate first by rounding each decimal to the nearest whole number.

WORKED EXAMPLE

Estimate and solve: 4.276 + 2.519

1. Estimate: 4 + 3 = 7.
2. Line up the decimal points: 4.276 + 2.519
3. Add each place from right to left, regrouping when needed: 4.276 + 2.519 ------- 6.795

Answer: 6.795, estimate: 7

PRACTICE 6 problems

1 Round to the nearest whole number to estimate. Then solve: 6.482 + 1.307

ANSWER _____

2 Round to the nearest whole number to estimate. Then solve: 9.004 - 3.586

ANSWER _____

3 Round to the nearest whole number to estimate. Then solve: 0.875 + 2.640

ANSWER _____

4 Round to the nearest whole number to estimate. Then solve: 7.230 - 0.468

ANSWER _____

5 Round to the nearest whole number to estimate. Then solve: 13.600 + 4.087

ANSWER _____

6 Round to the nearest whole number to estimate. Then solve: 8.001 - 2.999

ANSWER _____

APPLY IT Show your work

1 At robotics club, a drone flies 1.275 kilometers in the morning, 2.480 kilometers after lunch, and 0.635 kilometer before club ends. Estimate the total distance to the nearest kilometer. Then find the exact total distance.

WORK SPACE

ANSWER _____

2 Jalen has 15.750 meters of yarn for friendship bracelets. He uses 4.680 meters for one bracelet and 3.295 meters for another bracelet. Estimate how much yarn is left to the nearest meter. Then find the exact amount left.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school garden has 9.875 kilograms of compost. Students use 2.468 kilograms on Monday and 3.759 kilograms on Tuesday. Estimate the compost left to the nearest kilogram. Then find the exact amount left and explain how your estimate helps check your answer.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Detective

GRADE 4 · 4.CE.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Round to the nearest whole number to estimate. Then solve: 6.482 + 1.307	**Estimate: 7; exact sum: 7.789**
2	Round to the nearest whole number to estimate. Then solve: 9.004 - 3.586	**Estimate: 5; exact difference: 5.418**
3	Round to the nearest whole number to estimate. Then solve: 0.875 + 2.640	**Estimate: 4; exact sum: 3.515**
4	Round to the nearest whole number to estimate. Then solve: 7.230 - 0.468	**Estimate: 7; exact difference: 6.762**
5	Round to the nearest whole number to estimate. Then solve: 13.600 + 4.087	**Estimate: 18; exact sum: 17.687**
6	Round to the nearest whole number to estimate. Then solve: 8.001 - 2.999	**Estimate: 5; exact difference: 5.002**

PART 2 · APPLY IT

1. **Estimate: 4 kilometers; exact total: 4.390 kilometers** Round to get 1 + 2 + 1 = 4 kilometers. Add 1.275 + 2.480 + 0.635 = 4.390 kilometers.
2. **Estimate: 8 meters; exact amount left: 7.775 meters** Round to get 16 - 5 - 3 = 8 meters. Subtract 4.680 and 3.295 from 15.750 to get 7.775 meters.

CHALLENGE

Estimate: 4 kilograms. Exact amount left: 3.648 kilograms. Rounding gives 10 - 2 - 4 = 4, so 3.648 kilograms is reasonable.

Accept equivalent decimal forms, such as 4.39 for 4.390, when the value is correct. Estimates may vary only if students use a reasonable stated strategy, but nearest-whole-number estimates are shown in the key.