LESSON MAKER PRO

Decimal Mission Math

Estimate, solve, and check decimal problems.

GRADE 5 · 5.CE.3

5.CE.3 "The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition, subtraction, multiplication, and division with decimal numbers..."

NAME _____ DATE _____

ESTIMATE AND SOLVE

Estimate first to decide whether your answer makes sense. When you multiply decimals, multiply as whole numbers first, then place the decimal by counting the total decimal places in the factors. When you divide by a decimal in tenths, move both decimal points one place right to make the divisor a whole number.

WORKED EXAMPLE

Find 2.34×7.

1. Estimate: $2.3 \times 7 = 16.1$.
2. Multiply $234 \times 7 = 1{,}638$.
3. The factor 2.34 has two decimal places, so place the decimal two places from the right.
4. $2.34 \times 7 = 16.38$.

Answer: 16.38

PRACTICE 6 problems

1 Round each number to the nearest whole number to estimate 4.78 + 2.16. Then find the exact sum.

ANSWER _____

2 Round each number to the nearest tenth to estimate 9.3 - 4.68. Then find the exact difference.

ANSWER _____

3 Round to the nearest tenth to estimate 0.84 × 3.5. Then find the exact product.

ANSWER _____

4 Estimate by rounding 3.07 to the nearest whole number. Then find 3.07 × 6.

ANSWER _____

5 Use compatible numbers to estimate, then find 7.2 ÷ 0.3.

ANSWER _____

6 Round 4.56 to the nearest tenth, divide by 8, and round that quotient to the nearest tenth for an estimate. Then find the exact quotient of 4.56 ÷ 8.

ANSWER _____

APPLY IT Show your work

1 Three game passes cost $1.75 each. A snack costs $2.40. Round each cost to the nearest whole dollar to estimate the total cost. Then find the exact total cost.

WORK SPACE

ANSWER _____

2 For a stage show, a drama club has 7.2 meters of ribbon. Each award badge needs 0.6 meter of ribbon. Use compatible numbers to estimate, then find how many badges the club can make.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A student has $18.50. The student buys 3 controller grips for $2.35 each. Round each amount to the nearest tenth to estimate how much money is left. Then find the exact amount left and write one sentence explaining why the exact answer is reasonable.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Mission Math

GRADE 5 · 5.CE.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Round each number to the nearest whole number to estimate 4.78 + 2.16. Then find the exact sum.	**Estimate: 7; exact sum: 6.94**
2	Round each number to the nearest tenth to estimate 9.3 - 4.68. Then find the exact difference.	**Estimate: 4.6; exact difference: 4.62**
3	Round to the nearest tenth to estimate 0.84 × 3.5. Then find the exact product.	**Estimate: 2.8; exact product: 2.94**
4	Estimate by rounding 3.07 to the nearest whole number. Then find 3.07 × 6.	**Estimate: 18; exact product: 18.42**
5	Use compatible numbers to estimate, then find 7.2 ÷ 0.3.	**Estimate: 24; exact quotient: 24**
6	Round 4.56 to the nearest tenth, divide by 8, and round that quotient to the nearest tenth for an estimate. Then find the exact quotient of 4.56 ÷ 8.	**Estimate: 0.6; exact quotient: 0.57**

PART 2 · APPLY IT

1. **Estimate: $8; exact total: $7.65** The passes cost 3 × $1.75 = $5.25. Add $2.40 to get $7.65.
2. **Estimate: 12 badges; exact answer: 12 badges** Move both decimal points one place right: 7.2 ÷ 0.6 becomes 72 ÷ 6. The quotient is 12.

CHALLENGE

The estimate is $11.30 and the exact amount left is $11.45, which is reasonable because the exact prices are close to the rounded prices.

Accept equivalent decimal forms, such as .57 for 0.57 and $11.3 for $11.30. For estimates, accept equivalent reasonable estimates when the student uses the rounding method named in the problem.