

Error Experts Answer Key

1. Mistake: Decimal point placed incorrectly. Correct product: 3.6
2. Mistake: Decimal point was ignored. Correct product: 0.48
3. Mistake: Decimal place not carried into the product. Correct product: 13.00 (or 13)
4. Mistake: Forgot that multiplying by a decimal less than 1 makes the product smaller. Correct product: 1.56
5. Mistake: Decimal point placed incorrectly. Correct product: 3.10 (or 3.1)
6. Mistake: Decimal point ignored. Correct product: 0.36
7. Mistake: Too many decimal places in the product. Correct product: 18.21
8. Mistake: Decimal point placed incorrectly. Correct product: 0.864

Teacher's Guide

- Review each incorrect solution before students begin and remind them that the goal is to explain the error, not just fix the answer.
- Encourage students to estimate each product first to decide whether the given answer is reasonable.
- Support students by having them count the total decimal places in the factors before placing the decimal in the product.
- Pair students to compare explanations and discuss which error occurred in each problem.
- Ask students to classify each mistake, such as incorrect decimal placement, ignoring place value, or unreasonable answer.
- Challenge students to create one incorrect decimal multiplication problem for a partner to analyze and correct.
- Reinforce that estimation and place value are useful tools for checking the reasonableness of decimal multiplication results.