

Grade 6 • Unit 5 Worksheet

Arithmetic in Base Ten

Name: _____

Date: _____

Part A • Adding & Subtracting Decimals

Aligning place value is the key. Show your work — don't just write the answer.

1. Compute each. Show your work, aligning the decimal points.

a. $4.27 + 13.6 =$ _____

b. $12.5 - 8.347 =$ _____

c. $0.4 + 0.06 + 0.009 =$ _____

2. Explain why $0.4 + 0.06$ is NOT equal to 0.10 . What is the correct answer, and where does the confusion come from?

Correct answer: _____

Explanation:

Part B • Multiplying Decimals

3. Compute 2.3×1.4 in TWO ways:

Way 1. Use an area diagram (decompose $2.3 = 2 + 0.3$ and $1.4 = 1 + 0.4$):

Way 2. Compute 23×14 with whole numbers, then place the decimal point:

Answer: _____

4. Without computing, estimate each product. Then check by computing.

a. $0.8 \times 7.4 \rightarrow$ Estimate: _____ Actual: _____

b. $12.5 \times 0.04 \rightarrow$ Estimate: _____ Actual: _____

If you multiply by a number less than 1, is the product larger or smaller than the original? Why?

Part C • Dividing Decimals

5. Compute $147 \div 6$ using long division. Show all steps.

Answer: _____

6. Compute $12.6 \div 0.4$. Show your method.

Show your work (consider multiplying both by 10 first):

Answer: _____

7. Find $4.32 \div 8$. Show your work.

Answer: _____

Part D • Error Analysis

8. Diego computed 2.4×0.5 and wrote: ' $2.4 \times 0.5 = 12$ because $24 \times 5 = 120$.' Is Diego correct?

☐ Yes ☐ No

What did Diego forget to do?

Correct answer: _____

9. Mai computed $0.6 \div 0.2 = 0.3$. Is she correct? If not, what's the right answer and the right reasoning?

☐ Yes ☐ No. Correct answer: _____

What was Mai's mistake?

Part E • Thinking Deeply

10. Sami has \$20 to spend on lunch for the week. Each lunch costs \$3.85. Can Sami afford a lunch every day Monday–Friday?

Show your work:

Answer with justification:

11. Write your OWN multiplication problem with decimals where the answer is between 0.1 and 1. Solve it.

My problem:

Solution:
