

Grade 4 • Unit 6 Worksheet

Multiplying and Dividing Multi-digit Numbers

Name: _____

Date: _____

Part A • Patterns

1. Rule: Start with 4. Multiply by 2 each time.

Next 6 terms: 4, _____, _____, _____, _____, _____, _____.

What do you notice (even/odd, multiples, digit patterns)?

-
2. Rule: Start with 5. Add 5 each time. Write the first 10 terms.

Terms:

Predict the 20th term. Explain how you knew without writing them all.

Part B • Multi-Digit Multiplication

3. Find each product. Use partial products or an area diagram. Show your work.

a. $46 \times 8 =$ _____

b. $327 \times 4 =$ _____

c. $53 \times 27 =$ _____

4. Mai found 38×24 by splitting $38 = 30 + 8$ and $24 = 20 + 4$. Write the FOUR partial products and find the total.

Partial products: _____ + _____ + _____ + _____ = _____

5. Diego computed $26 \times 4 = 100 + 4 = 104$. (His idea: $25 \times 4 = 100$, then add one more $\times 4$.) Use Diego's idea to find 39×5 .

Is Diego's $26 \times 4 = 104$ correct? _____. Why?

Find 39×5 using Diego's idea:

Answer: _____

Part C • Multi-Digit Division

6. Find each quotient. Use partial quotients or another clear method.

a. $84 \div 6 =$ _____

b. $256 \div 8 =$ _____

c. $745 \div 5 =$ _____

7. Han is sharing 73 markers equally among 4 students. How many does each get, and how many are LEFT OVER?

Show your work:

Each student: _____. Remainder: _____.

What could Han DO with the leftover markers? List two reasonable options.

Part D • Interpreting Remainders

8. There are 125 students going on a field trip. Each bus holds 30 students. How many buses are needed?

Compute: $125 \div 30 =$ _____ remainder _____

Number of buses: _____. Explain WHY this answer.

9. Sara baked 47 cookies. She wants EXACTLY 6 in each bag. How many full bags, and how many cookies are left?

Compute: $47 \div 6 =$ _____ remainder _____

Full bags: _____. Cookies left: _____

Part E • Reasoning and Error Analysis

10. Lin says: "To find 46×8 fast, I do $46 \times 10 = 460$, then subtract 2×46 ." Use Lin's idea to find 36×9 .

Answer: _____

11. Pat tried 38×4 by writing ' $8 \times 4 = 32$ and $3 \times 4 = 12$ so the answer is 1232.' Is Pat correct? Why or why not?

12. Write a story problem for $156 \div 4$. Tell what the remainder MEANS in the story.

My problem:

$156 \div 4 =$ _____ remainder _____

What the remainder means in the story:
