

Chapter 8 — Order of Operations

Worksheet C: Mixed Application

Name: _____ Grade: _____ Date: _____

1. A student evaluates $16 - 3 \times 4$ as 52. Explain the mistake and find the correct value.

2. A phone plan charges a base fee of \$8 plus \$3 for each of 5 extra data blocks. Write and evaluate an expression for the total charge.

3. Evaluate: $(22 - 8) \div 2 + 9$

4. Evaluate: $5 + 4^2 \times 2$

5. Evaluate: $63 \div 9 \times 2 - 5$

6. Evaluate: $18.4 - 12 \div 3$

7. A student evaluates $28 \div 4 \times 3$ as $\frac{7}{3}$. Explain the error and find the correct value.

8. Evaluate: $-9 + 2^3 \times 3$

9. A rectangular garden has a length of 12 m and a width of 4 m. A 5 m path is added along one side. Evaluate $12 \times 4 + 5$.

10. Evaluate: $50 - (6 + 2) \times 4$

11. Evaluate: $81 \div 9 + 4^2$

12. A student begins $7 + 18 \div 3 - 2$ by adding 7 and 18. Explain why this is not allowed, then calculate correctly.

13. Evaluate: $[30 - 2 \times (9 + 3)] \div 2$

14. Non-Routine: Use the numbers 2, 3, and 4 to create two expressions with different bracket placement and different values. Show both evaluations.

15. Non-Routine: Place one pair of brackets in $6 + 2 \times 5 - 3$ so that the value is 37. Show your evaluation.
