WS 1-3H **Order of Operations** NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 PERIOD \_\_\_\_ DATE \_\_\_\_\_\_\_\_\_\_

Simplify **without a calculator**:

\_\_\_\_ 1. 8 + 5 • 42 \_\_\_\_ 2. 2 + 8 • 32

\_\_\_\_ 3. 33 – 3 • 23 \_\_\_\_ 4. -22 + 42

\_\_\_\_ 5. 16 + 4(7 – 4 + 1) \_\_\_\_ 6. 13 – (3 + 2)2

\_\_\_\_ 7. 14 + 8 ÷ 2 – 1 \_\_\_\_ 8. 30 + 10 ÷ 5 – 3

\_\_\_\_ 9. 24 – 6 + 2 \_\_\_\_ 10. 24 – 6 • 2

\_\_\_\_ 11. 24 ÷ 6 •2 \_\_\_\_ 12. 24 ÷ 6 ÷ 2

\_\_\_\_ 13. 5 + 2 • 4 + 3 \_\_\_\_ 14. (5 + 2 ) • 4 + 3

\_\_\_\_ 15. 5 + 2 • ( 4 + 3) \_\_\_\_ 16. 48 + 2 [12 ÷ (2 •3)]

\_\_\_\_ 17.  \_\_\_\_ 18. 20 ÷ 5 – (6 – 3)

\_\_\_\_ 19. 20 ÷ 5 – (6 – 3) \_\_\_\_ 20. 20 ÷ (5 – (6 – 3))

**Substitution:** For problems 21-29, evaluate each expression using the given values.

a = 5 b = -3 c = 2 d = -1

\_\_\_\_ 21. 4ab \_\_\_\_ 22.  \_\_\_\_ 23. 

\_\_\_\_ 24.  \_\_\_\_ 25.  \_\_\_\_ 26. 

\_\_\_\_ 27.  \_\_\_\_ 28.  \_\_\_\_ 29. 

Add grouping symbols (parenthesis) to create a true statement.

30.  31. 

32.  33. 