

# Parentheses, Brackets, and Braces

Grade 5 Math • Section 3.2

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 14

## Quick Review and Helpful Hints

**Grouping symbols:** Parentheses ( ), brackets [ ], braces { }.

**Rule:** Work from the **innermost** grouping outward. Evaluate parentheses first, then brackets, then braces.

All three types of grouping symbols mean “do this first.” They are used together to make nested expressions easier to read.

**Example:** Evaluate  $\{[3 + (5 \times 2)] - 4\} \times 3$ .

Innermost first:  $(5 \times 2) = 10$ . Brackets next:  $[3 + 10] = 13$ . Braces:  $\{13 - 4\} = 9$ . Finally:  $9 \times 3 = 27$ .

**Answer:** 27

## Practice Problems

Evaluate each expression by working from the innermost grouping outward.

1.  $(6 + 2) \times [3 + 1] =$  \_\_\_\_\_

7.  $3 \times \{[8 + (6 \div 2)] - 5\} =$  \_\_\_\_\_

2.  $[(8 - 3) \times 4] + 2 =$  \_\_\_\_\_

8.  $\{[5 + 3] \times [7 - 4]\} - 10 =$  \_\_\_\_\_

3.  $\{[2 \times (4 + 1)] + 3\} =$  \_\_\_\_\_

9.  $[(20 - 6) \div (3 + 4)] \times 5 =$  \_\_\_\_\_

4.  $5 \times [(9 - 5) + 2] =$  \_\_\_\_\_

10.  $\{[2^3 + (3 \times 2)] - 4\} =$  \_\_\_\_\_

5.  $\{[(12 - 4) \div 2] + 6\} \times 2 =$  \_\_\_\_\_

11.  $4 + \{[6 \times (1 + 2)] \div 9\} =$  \_\_\_\_\_

6.  $[(15 \div 3) + (4 \times 2)] =$  \_\_\_\_\_

12.  $\{[(18 - 6) \div 3] + 1\} \times 7 =$  \_\_\_\_\_

## Word Problems

13. Write a numerical expression using parentheses and brackets that equals 40: “Add 3 and 5, then multiply by the difference of 9 and 4.” Evaluate to check.

14. Alex evaluates  $\{[4 + (2 \times 3)] \times 5\}$  and gets 70. Check his work and explain whether he is correct.

\_\_\_\_\_

\_\_\_\_\_



## Answer Keys

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

### Step-by-Step Explanations

1. Start with the main idea. For parentheses, brackets, and braces, follow the order of operations in  $(6 + 2) \times [3 + 1]$ . The value is 32. Grouped expressions come first, then exponents, then multiplication or division before addition or subtraction.

2. Keep the work tidy. For parentheses, brackets, and braces, follow the order of operations in  $[(8 - 3) \times 4] + 2$ . The value is 22. Work from the inside out when you see parentheses, brackets, or braces.

3. Look at what the numbers mean. For parentheses, brackets, and braces, follow the order of operations in  $\{[2 \times (4 + 1)] + 3\}$ . The value is 13. One careful line at a time is better than trying to do the whole expression mentally.

4. Use the setup first. For parentheses, brackets, and braces, follow the order of operations in  $5 \times [(9 - 5) + 2]$ . The value is 30. Grouped expressions come first, then exponents, then multiplication or division before addition or subtraction.

5. Check the size of the answer. For parentheses, brackets, and braces, follow the order of operations in  $\{[(12 - 4) \div 2] + 6\} \times 2$ . The value is 20. Work from the inside out when you see parentheses, brackets, or braces.

6. Match the operation to the words. For parentheses, brackets, and braces, follow the order of operations in  $[(15 \div 3) + (4 \times 2)]$ . The value is 13. One careful line at a time is better than trying to do the whole expression mentally.

7. Write the important values first. For parentheses, brackets, and braces, follow the order of operations in  $3 \times \{[8 + (6 \div 2)] - 5\}$ . The value is 18. Grouped expressions come first, then exponents, then multiplication or division before addition or subtraction.

8. Follow the pattern carefully. For parentheses, brackets, and braces, follow the order of operations in  $\{[5 + 3] \times [7 - 4]\} - 10$ . The value is 14. Work from the inside out when you see parentheses, brackets, or braces.

9. Start with the main idea. For parentheses, brackets, and braces, follow the order of operations in  $[(20 - 6) \div (3 + 4)] \times 5$ . The value is 10. One careful line at a time is better than trying to do the whole expression mentally.

10. Keep the work tidy. For parentheses, brackets, and braces, follow the order of operations in  $\{[2^3 + (3 \times 2)] - 4\}$ . The value is 10. Grouped expressions come first, then exponents, then multiplication or division before addition or subtraction.

11. Look at what the numbers mean. For parentheses, brackets, and braces, follow the order of operations in  $4 + \{[6 \times (1 + 2)] \div 9\}$ . The value is 6. Work from the inside out when you see parentheses, brackets, or braces.

12. Use the setup first. For parentheses, brackets, and braces, follow the order of operations in  $\{[(18 - 6) \div 3] + 1\} \times 7$ . The value is 35. One careful line at a time is better than trying to do the whole expression mentally.

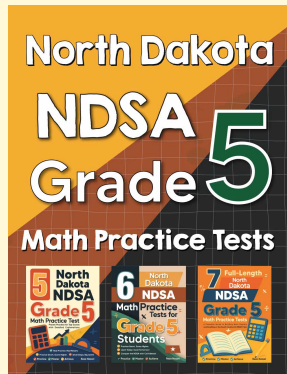
13. Check the size of the answer. For parentheses, brackets, and braces, add  $3 + 5 = 8$  and subtract  $9 - 4 = 5$ ;  $8 \times 5 = 40$ . Grouped expressions come first, then exponents, then multiplication or division before addition or subtraction.

14. Match the operation to the words. For parentheses, brackets, and braces, inside the braces,  $4 + (2 \times 3) = 10$ , and  $10 \times 5 = 50$ , not 70. Work from the inside out when you see parentheses, brackets, or braces.



# Want Even More Practice?

Check Out Our Other North Dakota NDSA Test Books!



## North Dakota NDSA Grade 5 Math Preparation Bundle

18 full-length practice tests across three books  
(5 + 6 + 7)

No repeated questions—maximum practice value!



**18 Tests!**  
**3 Books**  
**One Bundle**

**Important:** All our test books contain **unique, completely different tests** from each other! Each book offers fresh practice questions—no repeats!

### 5 Practice Tests

- ✓ 5 complete practice tests with detailed explanations
- ✓ Perfect foundation for NDSA test preparation
- ✓ Builds confidence and test-taking skills
- ✓ High-quality questions aligned with state standards

**Start your practice journey!**

### 6 Practice Tests

- ✓ 6 complete practice tests with detailed explanations
- ✓ **Unique tests**—different from the 5 tests book
- ✓ Perfect for more practice after mastering 5 tests
- ✓ Builds even more confidence and test-taking skills
- ✓ Same high-quality questions aligned with standards

**Take your practice to the next level!**

### 7 Practice Tests

- ✓ 7 complete practice tests for maximum preparation
- ✓ **Unique tests**—different from 5 and 6 tests books
- ✓ The most comprehensive practice for Grade 5
- ✓ Ideal for students aiming for top scores
- ✓ Extensive practice builds mastery and confidence

**Go all the way with comprehensive practice!**