

Grade 5 · Numerical Expressions · Test

Common Core 5.OA.A.1, 5.OA.A.2 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

This test has 8 questions and is worth 20 points. It covers evaluating numerical expressions with parentheses, brackets, and braces, writing expressions, and interpreting them (5.OA.A.1, 5.OA.A.2). Work in order, show your steps, and allow about 45 minutes.

Test information

- **Grade:** Grade 5
- **Chapter:** Numerical Expressions
- **Common Core:** 5.OA.A.1, 5.OA.A.2
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 3 pts; Question 2: 3 pts; Question 3: 3 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 3 pts; Question 7: 2 pts; Question 8: 2 pts)

Question 1: Evaluate with parentheses (3 points)

- Evaluate $4 \times (15 - 9)$. (1 point)
- Evaluate $56 \div (3 + 4)$. (1 point)
- Evaluate $100 - (8 \times 7)$. (1 point)

Question 2: Nested grouping symbols (3 points)

- Evaluate $2 \times [9 + (12 \div 3)]$. (1 point)
- Evaluate $120 \div \{4 \times [2 + (9 - 6)]\}$. (2 points)

Question 3: Write expressions (3 points)

Write an expression for each phrase. Do not evaluate.

- Multiply the sum of 9 and 14 by 3. (1 point)
- Subtract the product of 4 and 5 from 50. (1 point)
- Divide the difference of 30 and 12 by 6. (1 point)

Question 4: Interpret without evaluating (2 points)

Consider the expression $4 \times (25 + 17)$. Do not find any values.

- Compare $4 \times (25 + 17)$ with $25 + 17$. (1 point)
- Without calculating, tell whether $\frac{1}{3} \times (24 + 9)$ is less than, equal to, or greater than $24 + 9$. Explain. (1 point)

Question 5: Insert parentheses (2 points)

Copy each equation and insert one pair of parentheses to make it true.

$$3 + 5 \times 4 = 32$$

$$18 \div 2 + 1 = 6$$

Equations to fix.

- Fix the first equation. (1 point)
- Fix the second equation. (1 point)

Question 6: Farmers market boxes (3 points)

Priya packs 5 boxes at the farmers market. Each box holds 8 peaches and 3 plums. She then gives 9 pieces of fruit to a neighbor.

Box 1	8 peaches	3 plums
Box 2	8 peaches	3 plums
Box 3	8 peaches	3 plums
Box 4	8 peaches	3 plums
Box 5	8 peaches	3 plums

Priya's five boxes.

- Write one expression for the number of pieces of fruit Priya has left. (1 point)
- Evaluate your expression. (1 point)
- Tell what $8 + 3$ means in this problem. (1 point)

Question 7: Noah's notebook (2 points)

Noah worked this problem in his notebook.

$$\begin{aligned} &48 \div (4 + 4) \\ &= 48 \div 4 + 4 \\ &= 12 + 4 \\ &= 16 \end{aligned}$$

Noah's work.

- a. Describe Noah's mistake. (1 point)
- b. Find the correct value. (1 point)

Question 8: Compare two expressions (2 points)

Evaluate $5 \times (7 - 2)$ and $5 \times 7 - 2$. Then tell which expression has the greater value.