

Grade 3 · Two-Step Word Problems and Patterns · Test

Common Core 3.OA.D.8, 3.OA.D.9 · mathovore.fr

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

This test has 9 questions worth 20 points. It covers two-step word problems with a letter for the unknown, estimation, and arithmetic patterns (3.OA.D.8 and 3.OA.D.9). Show every step and plan about 45 minutes.

Test information

- **Grade:** Grade 3
- **Chapter:** Two-Step Word Problems and Patterns
- **Common Core:** 3.OA.D.8, 3.OA.D.9
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 3 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 2 pts; Question 7: 3 pts; Question 8: 2 pts; Question 9: 2 pts)

Question 1: Find the unknown (2 points)

Find the value of each letter.

- a. $38 + n = 75$ (1 point)
b. $9 \times k = 63$ (1 point)

Question 2: Marbles in bags (3 points)

Priya has 5 bags with 6 marbles in each bag and 4 loose marbles. Let m be the total number of marbles.

	m					
Marbles	6	6	6	6	6	4

5 bags and 4 loose marbles.

- a. Write an equation for m . (1 point)

- b. Solve the equation. (1 point)
- c. Priya gives 9 marbles to a friend. How many marbles does she have now? (1 point)

Question 3: Estimate by rounding (2 points)

Jamal adds $473 + 286$.

- a. Round each number to the nearest 100 and estimate the sum. (1 point)
- b. Find the exact sum. Is it reasonable? Explain. (1 point)

Question 4: Complete the pattern (2 points)

Look at the pattern.



A number pattern.

- a. Write the two missing numbers. (1 point)
- b. Write the rule for the pattern. (1 point)

Question 5: Multiplication table pattern (2 points)

Part of a multiplication table is shown.

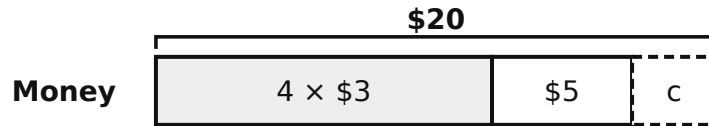
×	1	2	3	4	5	6
3	3	6	9	12	?	18
6	6	12	18	?	30	36

Two products are missing.

- a. Write the two missing products. (1 point)
- b. Compare each number in the 6s row with the number above it. Explain why this happens. (1 point)

Question 6: Change at the store (2 points)

Ethan buys 4 pens that cost \$3 each and a notebook that costs \$5. He pays with a \$20 bill. Let c be his change.



The \$20 is split into the cost and the change.

- Write an equation for c . (1 point)
- Solve the equation. (1 point)

Question 7: Sharing stickers (3 points)

Sofia has 24 stickers and Jamal has 18 stickers. They share all the stickers equally among 6 friends.

- Write an equation with s for the number of stickers each friend gets. (1 point)
- Solve the equation. (1 point)
- Each friend gives 3 stickers to the teacher. How many stickers does each friend have now? (1 point)

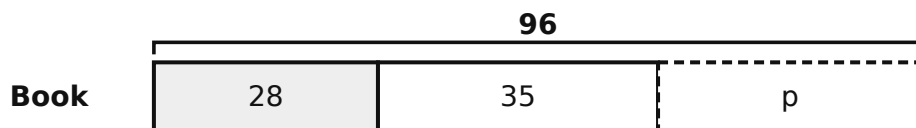
Question 8: Order of operations (2 points)

Find the value of each expression.

- $7+2 \times 6$ (1 point)
- $(7+2) \times 6$ (1 point)

Question 9: Pages left (2 points)

Aisha's book has 96 pages. She reads 28 pages on Monday and 35 pages on Tuesday. Let p be the number of pages left.



The book is split into pages read and pages left.

- Write an equation for p . (1 point)
- Solve the equation. (1 point)