

Grade 4 · Multi-Digit Multiplication · Test

Answer Key

Common Core 4.NBT.B.5 · mathovore.fr

Use this answer key to score the multi-digit multiplication test. Every solution shows the partial products and a scoring guide that explains how the points are awarded, so a student who has the right method but a small slip still earns credit. The total is 20 points.

Grade 4 Common Core: 4.NBT.B.5

Question 1: Find the products (2 points)

a. Partial products: $7 \times 4,000 = 28,000$, $7 \times 300 = 2,100$, $7 \times 60 = 420$, $7 \times 8 = 56$.

Add: $28,000 + 2,100 + 420 + 56 = 30,576$.

30,576

b. Partial products: $60 \times 80 = 4,800$, $60 \times 5 = 300$, $3 \times 80 = 240$, $3 \times 5 = 15$.

Add: $4,800 + 300 + 240 + 15 = 5,355$.

5,355

Scoring: 1 point for each correct product.

Question 2: Area model (2 points)

$40 \times 30 = 1,200$, $40 \times 7 = 280$, $6 \times 30 = 180$, $6 \times 7 = 42$.

	40	6
30	1,200	180
7	280	42

Partial products 1,200, 280, 180, 42.

Total: $1,200 + 280 + 180 + 42 = 1,702$. **1,702**

Scoring: 1 point for the four partial products; 1 point for the correct total.

Question 3: Partial products (2 points)

Partial products: $8 \times 3,000 = 24,000$, $8 \times 200 = 1,600$, $8 \times 6 = 48$.

Add: $24,000 + 1,600 + 48 = 25,648$.

	3,000	200	6
8	24,000	1,600	48

Partial areas 24,000, 1,600, and 48.

25,648

Scoring: 1 point for correct partial products; 1 point for the correct total.

Question 4: Priya's mistake (2 points)

Priya treated 508 as $50 + 8$, but 508 is $500 + 8$, so the hundreds part should be $6 \times 500 = 3,000$.

Correct: $3,000 + 48 = 3,048$. **3,048**

Scoring: 1 point for the explanation; 1 point for the correct product.

Question 5: Estimate and exact (2 points)

a. $50 \times 60 = 3,000$. **3,000**

b. Partial products: $40 \times 60 = 2,400$, $40 \times 2 = 80$, $9 \times 60 = 540$, $9 \times 2 = 18$.

Add: $2,400 + 80 + 540 + 18 = 3,038$.

3,038

Scoring: 1 point for each part.

Question 6: Properties (2 points)

Swap and regroup: $5 \times 17 \times 2 = 17 \times (5 \times 2) = 17 \times 10 = 170$. The commutative and associative properties were used. **170**

Scoring: 1 point for the correct product; 1 point for naming a correct property.

Question 7: Team baseballs (3 points)

a. Partial products: $10 \times 10 = 100$, $10 \times 4 = 40$, $8 \times 10 = 80$, $8 \times 4 = 32$.

Add: $100 + 40 + 80 + 32 = 252$.

	10	8
10	100	80
4	40	32

Partial areas 100, 40, 80, 32.

252 players

b. $3 \times 252 = 600 + 150 + 6 = 756$. **756 baseballs**

Scoring: (a) 1 point. (b) 1 point for multiplying 3 by 252 and 1 point for the correct answer.

Question 8: Two stadiums (3 points)

Partial products: $6 \times 2,000 = 12,000$, $6 \times 400 = 2,400$, $6 \times 70 = 420$, $6 \times 5 = 30$.

Add: $12,000 + 2,400 + 420 + 30 = 14,850$.

Stadium A has 14,850 seats. $14,850 - 14,520 = 330$.

Stadium A has 330 more seats.

Scoring: 2 points for the correct seats in Stadium A; 1 point for the comparison.

Question 9: Multiples of ten (2 points)

a. $2 \times 6 = 12$ tens times 10: **1,200**

b. $9 \times 5 = 45$, times 100: **4,500**

Scoring: 1 point for each product.

Total
20 points