

Grade 4 - Multiplying Multi-Digit Numbers - Test Answer Key

Common Core 4.NBT.B.5 · maths-pdf.fr/en/

Use this answer key to score the test. Each solution lists the partial products, and the scoring note tells how the points are awarded. Total: 20 points.

Grade 4 · Common Core State Standards: **4.NBT.B.5**

Question 1 - Mental math [2 pts]

- a. $6 \times 3 = 18$, then attach two zeros. 1,800
- b. $8 \times 7 = 56$, then attach three zeros. 56,000

Scoring: 1 point for each answer.

Question 2 - Area model [2 pts]

	50	2
30	1,500	60
6	300	12

$$1,500 + 60 + 300 + 12 = 1,872.$$

$$1,500 + 60 + 300 + 12 = 1,872$$

$$1,872$$

Scoring: 1 point for the four correct partial products. 1 point for 1,872.

Question 3 - Four digits by one [2 pts]

$$3,000 \times 5 = 15,000, 800 \times 5 = 4,000, 60 \times 5 = 300, 2 \times 5 = 10.$$

$$15,000 + 4,000 + 300 + 10 = 19,310$$

$$19,310$$

Scoring: 1 point for correct partial products. 1 point for 19,310.

Question 4 - Two digits by two [2 pts]

	60	7
40	2,400	280
8	480	56

Partial products for 67×48 .

$$2,400 + 280 + 480 + 56 = 3,216$$

3,216

Scoring: 1 point for correct partial products. 1 point for 3,216.

Question 5 - Properties [2 pts]

Associative and commutative properties: $5 \times 18 \times 20 = (5 \times 20) \times 18$.

$$5 \times 20 = 100, \text{ and } 100 \times 18 = 1,800.$$

1,800

Scoring: 1 point for a valid regrouping. 1 point for 1,800.

Question 6 - Estimate and solve [2 pts]

Estimate: $50 \times 30 = 1,500$.

Exact: $48 \times 30 = 1,440$ and $48 \times 1 = 48$, so $1,440 + 48 = 1,488$.

about 1,500 ; exactly 1,488

Scoring: 1 point for the estimate. 1 point for the exact product.

Question 7 - Muffin boxes [3 pts]

- a. $24 \times 38 = 24 \times 30 + 24 \times 8 = 720 + 192 = 912$. **912 muffins**
- b. $24 \times 45 = 24 \times 40 + 24 \times 5 = 960 + 120 = 1,080$. **1,080 muffins**
- c. $912 + 1,080 = 1,992$. **1,992 muffins**

Scoring: 1 point for each part.

Question 8 - Find the mistake [3 pts]

- a. The 2 in 23 is 2 tens, so the partial product is $46 \times 20 = 920$, not $46 \times 2 = 92$.
- b. $920 + 138 = 1,058$. **1,058**
- c. $50 \times 20 = 1,000$. The product should be close to 1,000, so 230 is too small.

Scoring: 1 point for each part.

Question 9 - Stadium sections [2 pts]

All seats: $9 \times 1,250 = 11,250$ ($9 \times 1,000 = 9,000$, $9 \times 250 = 2,250$).

Open: $11,250 - 2,400 = 8,850$.

8,850 seats

Scoring: 1 point for 11,250. 1 point for 8,850.

Total
20 points