

Grade 5 - Multiplying Multi-Digit Whole Numbers - Test Answer Key

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

Use this answer key to grade the multiplication test. Each solution lists the partial products and a scoring guide. The total is 20 points. Give credit for any correct method, such as the standard algorithm or an area model, as long as every step is clear.

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

Question 1 - Short products [2 pts]

(a) $3 \times 6 = 18$, $80 \times 6 = 480$, $400 \times 6 = 2,400$. Total **2,898**.

(b) $72 \times 4 = 288$, times 10 is **2,880**.

Scoring: 1 point for each correct product.

Question 2 - Three digits by two digits [3 pts]

$$365 \times 4 = 1,460.$$

$$365 \times 20 = 7,300.$$

$$1460 + 7300 = 8760.$$

Answer: **8,760**

Scoring: 1 point for each partial product, 1 point for the correct sum. Do not give the third point if the placeholder zero is missing.

Question 3 - Four digits by two digits [2 pts]

$$2,148 \times 6 = 12,888 \text{ . } 2,148 \times 30 = 64,440.$$

$$12888 + 64440 = 77328.$$

Answer: **77,328**

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

Question 4 - Is it reasonable? [2 pts]

692 rounds to 700 and 41 rounds to 40. $700 \times 40 = 28,000$.

28,372 is very close to 28,000, so the answer is **reasonable**.

Scoring: 1 point for the estimate 28,000, 1 point for a correct conclusion with a reason.

Question 5 - Ethan's work [2 pts]

The 5 in 52 means 5 tens, so the second row should be $36 \times 50 = 1,800$, not 180. Ethan left out the placeholder zero.

Correct: $72 + 1800 = 1872$.

Answer: **1,872**

Scoring: 1 point for the explanation, 1 point for 1,872.

Question 6 - Area model [2 pts]

$40 \times 30 = 1,200$, $6 \times 30 = 180$, $40 \times 8 = 320$, $6 \times 8 = 48$.

$1200 + 180 + 320 + 48 = 1748$.

Answer: **1,748**

	40	6
30	1,200	180
8	320	48

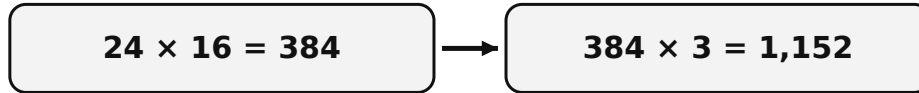
Completed area model.

Scoring: 1 point for the four partial products, 1 point for the total.

Question 7 - Little League supplies [3 pts]

(a) $24 \times 16 = 384$ ($24 \times 6 = 144$ and $24 \times 10 = 240$). **384 players**

(b) $384 \times 3 = 1,152$. **1,152 baseballs**



Two steps.

Scoring: (a) 1 point. (b) 1 point for multiplying 384 by 3, 1 point for the correct answer.

Question 8 - Bake sale totals [3 pts]

(a) $125 \times 4 = 500$. \$500

(b) $86 \times 3 = 258$. \$258

(c) $500 + 258 = 758$. \$758

Scoring: 1 point for each part. Accept a correct part (c) that follows from a wrong earlier part.

Question 9 - Check 507 times 20 [1 pt]

$507 \times 2 = 1,014$, but 20 is 2 tens. Multiply by 10 more: $507 \times 20 = 10,140$.

Answer: **No, the product is 10,140**

Scoring: 1 point for "no" with the correct product.

Total
20 points