

STANDARD ALGORITHM STEP BY STEP

$$35 \times 24$$

1 STEP 1: SET IT UP

H	T	O
	3	5
×	2	4

Align ones under ones and tens under tens.

Line up the place values.

2 STEP 2: MULTIPLY THE ONES

H	T	O
	2	
	3	5
×	2	4
		0

$$4 \times 5 = 20$$

Write 0 in the ones place.

Regroup (carry) 2 tens.

3 STEP 3: FINISH THE FIRST ROW

H	T	O
	2	
	3	5
×	2	4
1	4	0

$$4 \times 3 = 12$$

$$12 + 2 = 14$$

Write 14 before the 0.

Add the carried 2 only once.

$$35 \times 4 = 140$$

4 STEP 4: PLACE THE ZERO

H	T	O
	3	5
×	2	0
1	4	0

Use the 2 tens now.

The 2 in 24 means 20.

Before you multiply, put a 0 in the ones place.

This 0 holds the ones place.

placeholder 0

5 STEP 5: MULTIPLY BY THE TENS

H	T	O
1	3	5
×	2	0
1	4	0
7	0	0

Use the 2 tens now.

A $2 \times 5 = 10$

Write 0 in the tens place.
Regroup (carry) 1 hundred.

B $2 \times 3 = 6$

$6 + 1 = 7$
Write 7 in the hundreds place.

$$35 \times 20 = 700$$

6 STEP 6: ADD THE PARTIAL PRODUCTS

H	T	O
1	4	0
+	7	0
8	4	0

Add the columns:

ones: $0 + 0 = 0$

tens: $4 + 0 = 4$

hundreds: $1 + 7 = 8$

ANSWER:

$$35 \times 24 = 840$$

REMEMBER:

- 1 Multiply the ones row.
- 2 Put a placeholder 0.
- 3 Multiply the tens row.
- 4 Add the two rows.

CHECK:

$40 \times 20 = 800$,
so 840 makes sense.