

Boost Free Lessons - Year 6 Maths

Lesson 5: Multiplying by Two-Digit Numbers

Name: _____ Grade: _____ Date: _____

Worked Example 1

Work out 46×23 .

$$\begin{array}{r}
 46 \\
 \times 23 \\
 \hline
 138 \\
 920 \\
 \hline
 1058
 \end{array}$$

46×3
 46×20

1. Split the 23 into 20 and 3, then multiply by each part separately.
2. First multiply by the **ones**: $46 \times 3 = 138$.
3. Then multiply by the **tens**: $46 \times 20 = 920$. Writing a zero in the ones column keeps the digits in the right places.
4. Add the two partial answers: $138 + 920 = 1\,058$.

$46 \times 23 = 1\,058$

Worked Example 2

Estimate 38×52 before working it out.

1. Round each number to something easy to multiply.
2. 38 rounds to 40, and 52 rounds to 50.
3. $40 \times 50 = 2\,000$, so the answer should be near 2 000.
4. The exact answer is 1 976, which is close, so it is reasonable.

Estimate 2 000. Exact answer 1 976.

Remember: Split the second number into **tens and ones**, multiply by each part, then add. Write a zero in the ones column when multiplying by the tens.



Question 1: Work out the following.

1. 23×14

2. 35×21

3. 42×16

4. 54×23

5. 27×32

6. 63×18

7. 48×25

8. 76×34



Question 2: Answer the following.

1. Estimate 29×41 by rounding.
2. Estimate 68×52 by rounding.
3. Work out 125×24 .
4. Work out 208×36 .
5. Why is a zero written in the ones column of the second partial answer?
6. Check $34 \times 12 = 408$ by working out $34 \times 10 + 34 \times 2$.



Question 3: Answer the following questions.

1. A cinema has 24 rows with 18 seats in each. How many seats altogether?
2. Tickets cost \$23 each. What is the cost of 35 tickets?
3. A box holds 48 pencils. How many pencils in 26 boxes?
4. A farmer plants 45 rows of 32 trees. How many trees in total?
5. Estimate first, then work out 39×21 . Was your estimate close?





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Answers: Multiplying by Two-Digit Numbers**Question 1**

1. 322
2. 735
3. 672
4. 1 242
5. 864
6. 1 134
7. 1 200
8. 2 584

Question 2

1. 1 200
2. 3 500
3. 3 000
4. 7 488
5. Because you are multiplying by tens, not ones, so every digit must shift one place left.
6. $340 + 68 = 408$ (correct)

Question 3

1. 432 seats
2. \$805
3. 1 248 pencils
4. 1 440 trees
5. Estimate 800; exact answer 819, so the estimate was close.

