MATHEMATICS · GRADES 4-6

Multi-digit multiplication

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you multiply a bigger number in one go, like working out the cost of six tickets or the total seats in several rows. Multiplying a big number by a small one is the everyday version of multiplication, and it is how you price out a group purchase or a repeated cost. You use it to work out the cost of tickets for a group, the total seats in a theatre, or the price of buying the same item several times.



Rule

Multiply each digit by the single digit, working from the right.

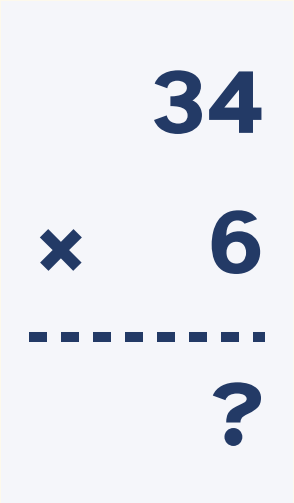
If a product is ten or more, write the ones digit and carry the tens forward into the next digit.

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Worked examples

EXAMPLE 1

Q $34 \times 6 = ?$



SOLUTION

Multiply the ones: 4 × 6 = 24. Write 4 and carry 2.

Multiply the tens: 3 × 6 = 18, plus the carried 2 = 20

Write 20. Total: 204

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EXAMPLE 2

Q 123 × 7 = ?

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  123
×   7
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    ?
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SOLUTION

Ones: 3 × 7 = 21. Write 1 and carry 2.

Tens: 2 × 7 = 14, +2 = 16. Write 6 and carry 1.

Hundreds: 1 × 7 = 7, +1 = 8. Total: 861

Practice questions

1 A box holds 46 pencils. How many pencils are in 7 boxes?

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2 A farmer plants 214 seeds in each row. How many seeds are in 6 rows?

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3 Tickets cost $45 each. How much do 6 tickets cost?

A $225.00

B $270.00

C $315.00

D $180.00

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4 Work out 67 × 8.

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5 **142 × ? = 710. What is the missing number?**

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6 **A car travels 522 km in 9 hours at the same speed each hour. How far does it travel in one hour?**

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7 **Mia says 28 × 4 = 82. What is 28 × 4 really?**

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8 $236 \times 3 = 708$. Use that to work out 236×6.

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9 A shop sells 84 pens a day for 7 days, then sells 50 more pens. How many pens did it sell in all?

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10 A printer prints 750 pages in 6 minutes. How many pages does it print in one minute?

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ANSWER KEY

1. 322

2. 1284

3. $270.00

4. 536

5. 5

6. 58

7. 112

8. 1416

9. 638

10. 125

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