

Multiplication Facts and Strategies

Learning the multiplication facts from 0×0 through 10×10 is one of the most useful things a third grader does. Strategies like doubling, skip-counting, and the “9 trick” make them easier to remember.

| Strategy | Example |
|----------------------------------|---|
| Skip-count by the smaller number | 3×4 : count by 3's four times (3, 6, 9, 12) |
| Double a known fact | 6×6 : double $3 \times 6 = 18$ to get 36 |
| The $\times 9$ trick | 9×7 : $10 \times 7 - 7 = 70 - 7 = 63$ |
| Break apart (distributive) | 7×8 : $5 \times 8 + 2 \times 8 = 40 + 16 = 56$ |

Key Concepts

- Skip-counting** is your first multiplication strategy. To find 3×4 , count by 3's four times: 3, 6, 9, 12.
- Doubling** lets you build on a fact you already know. If $3 \times 6 = 18$, then 6×6 is just double that: 36.
- The **$\times 9$ trick**: $9 \times n$ equals $10n - n$. So $9 \times 7 = 70 - 7 = 63$. Quick and almost foolproof.
- Aim for *automatic* recall of 0×0 through 10×10 . Strategies are great when you forget, but knowing them by heart is even better.


Worked Examples

① 7×8

 The “hardest” facts often respond to a break-apart strategy. Split 7 into $5 + 2$. Then $7 \times 8 = (5 \times 8) + (2 \times 8) = 40 + 16 = 56$. The two pieces are both easy: 5's are half of 10, and doubling is easy. Add them and you have your answer.

 **Answer:** 56

② 9×6

 Use the $\times 9$ trick. Replace 9 with 10, multiply, then subtract one copy of the other number: $10 \times 6 = 60$, then $60 - 6 = 54$. So $9 \times 6 = 54$. This works every time you multiply by 9.

 **Answer:** 54

③ 4×8

 Multiplying by 4 is the same as doubling twice. Start with 8, double it: 16. Double again: 32. That is because $4 = 2 \times 2$, so $4 \times 8 = 2 \times 2 \times 8$. Doubling is fast and rarely goes wrong.

 **Answer:** 32

Practice Problems

Find each product. Use any strategy that works for you.

- | | | | |
|-----------------|-------|------------------|-------|
| 1. 3×7 | _____ | 7. 6×6 | _____ |
| 2. 5×9 | _____ | 8. 2×8 | _____ |
| 3. 8×6 | _____ | 9. 10×7 | _____ |
| 4. 4×4 | _____ | 10. 8×9 | _____ |
| 5. 7×5 | _____ | 11. 4×7 | _____ |
| 6. 9×3 | _____ | 12. 6×9 | _____ |

Study Tips

- 👉 Flashcards work — spend 5 minutes a day on the facts you find hardest. Speed comes from repetition, not from a single long session.
- 👉 The $\times 5$ facts are half of the $\times 10$ facts. 5×8 is half of $10 \times 8 = 80$, so it's 40.
- 👉 The $\times 9$ facts follow a pattern: the digits of the answer add up to 9 ($9 \times 3 = 27 \rightarrow 2 + 7 = 9$). Use it as a check.

Word Problems

1. A spider has 8 legs. How many legs do 7 spiders have altogether?

Answer: _____



2. Each pack of crayons has 6 crayons. Mrs. Kim buys 9 packs. How many crayons in all?

Answer: _____

Answer Key — with Friendly Explanations**Practice Problems**

1. Skip-count by 3 seven times: 3, 6, 9, 12, 15, 18, 21.
 **Answer:** 21
2. 5×9 is half of $10 \times 9 = 90$, so 45.
 **Answer:** 45
3. $8 \times 6 = 5 \times 6 + 3 \times 6 = 30 + 18 = 48$.
 **Answer:** 48
4. 4×4 is double $2 \times 4 = 8$, so 16.
 **Answer:** 16
5. $7 \times 5 =$ half of $7 \times 10 = 70$, so 35.
 **Answer:** 35
6. $\times 9$ trick: $10 \times 3 - 3 = 27$.
 **Answer:** 27
7. 6×6 is double $3 \times 6 = 18$, so 36.
 **Answer:** 36
8. 2×8 is just double $8 = 16$.
 **Answer:** 16
9. Any number times 10 adds a zero: 70.
 **Answer:** 70
10. $\times 9$ trick: $10 \times 8 - 8 = 72$.
 **Answer:** 72
11. Double $2 \times 7 = 14$ to get $4 \times 7 = 28$.
 **Answer:** 28
12. $\times 9$ trick: $10 \times 6 - 6 = 54$.
 **Answer:** 54

Word Problems

1. $7 \times 8 = 56$. Each spider has 8 legs, 7 spiders means 7 groups of 8.
 **Answer:** 56 legs
2. $9 \times 6 = 54$. Nine packs of six crayons each.
 **Answer:** 54 crayons

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