Fluently Multiply and Divide Within 100

Apply the skill to decisions and designs

Name _____ **Date** _____ **Score** _____ / 8

QUICK REVIEW

Use known facts efficiently and check division with multiplication.

$6 \times 7 = (5 \times 7) + (1 \times 7) = 35 + 7 = 42$; therefore $42 \div 7 = 6$. For nines, $9 \times 8 = 80 - 8 = 72$. All facts on this page have products at most 100.

Worked example

Use 3×6 to find 6×6 by doubling.

1. The known product is $3 \times 6 = 18$.

2. Doubling the number of groups doubles the total: $18 + 18 = 36$.

Answer: 36.

Practice Problems

Show your thinking.

1. 8 trays each hold 9 rolls. Will 70 guests each get one? Find the number left.

2. Turn $49 \div 7$ into $7 \times \square = 49$. Find the box and the quotient.

3. Find the missing whole number: $9 \times \square = 81$. Check it.

4. Find 9×8 using 10×8.

5. Each lap takes 7 minutes. How long do 6 laps take? How many such laps fit exactly into 42 minutes?

6. You have 48 cents. A badge costs 8 cents and a tag costs 6 cents. Find how many of either item you could buy using all the money.

7. Design a multiplication fact with product 36. Both factors must be greater than 1, and one factor must be 9. Write its matching division.

8. A row of 8 chairs is added to 5 full rows of 8. Find the new chair total by adjusting the known product, then write a division check.

Answer Key

1. Yes; 2 rolls left.
2. $\square = 7$; $49 \div 7 = 7$.
3. $\square = 9$.
4. 72.
5. 42 minutes; 6 laps.
6. 6 badges or 8 tags.
7. $4 \times 9 = 36$; $36 \div 9 = 4$.
8. 48 chairs; $48 \div 8 = 6$ rows.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. All trays hold $8 \times 9 = 72$ rolls.
2. After giving out 70 rolls, $72 - 70 = 2$ remain.

Problem 2

1. The unknown factor counts how many 7s make 49: $7 \times 7 = 49$.
2. So $49 \div 7 = 7$. Check by multiplying $7 \times 7 = 49$.

Problem 3

1. Use the related fact $81 \div 9 = 9$ to find the missing number 9.
2. Substitute it: $9 \times 9 = 81$ and $81 \div 9 = 9$ are both true.

Problem 4

1. Ten groups give $10 \times 8 = 80$.
2. Remove one group: $80 - 8 = 72$, so $9 \times 8 = 72$.

Problem 5

1. Six laps take $6 \times 7 = 42$ minutes.
2. The inverse fact is $42 \div 7 = 6$ laps; the units change from minutes to laps.

Problem 6

1. Badges: $48 \div 8 = 6$, checked by $6 \times 8 = 48$ cents.
2. Tags: $48 \div 6 = 8$, checked by $8 \times 6 = 48$ cents. The same money buys different counts.

Problem 7

1. The unknown factor satisfies $9 \times \square = 36$, so $36 \div 9 = 4$.
2. Choose factors 4 and 9, both greater than 1; $4 \times 9 = 36$ checks the design.

Problem 8

1. The first five rows contain $5 \times 8 = 40$ chairs. Add 8: $40 + 8 = 48$.
2. There are now 6 rows, checked by $48 \div 8 = 6$.

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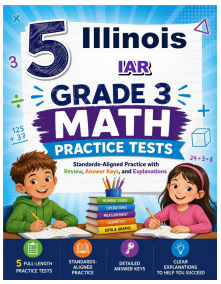

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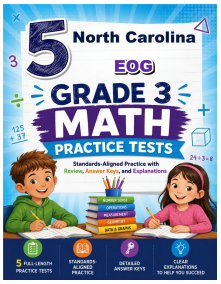

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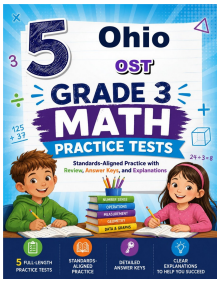

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