Fluently Multiply and Divide Within 100

Explore ideas and representations

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. Use 3×7 to find 6×7 by doubling.

2. Use $8 = 6 + 2$ to find 6×8. Show two smaller products.

3. Turn $28 \div 7$ into $7 \times \square = 28$. Find the box and the quotient.

4. Find the missing whole number: $5 \times \square = 45$. Check it.

5. Eli uses $4 \times 7 = 24$ to solve $24 \div 4$. Repair the multiplication fact.

6. Find 9×6 using 10×6.

7. 8 trays each hold 3 rolls. Will 22 guests each get one? Find the number left.

8. Turn $35 \div 5$ into $5 \times \square = 35$. Find the box and the quotient.

Answer Key

1. 42.
2. 48.
3. $\square = 4$; $28 \div 7 = 4$.
4. $\square = 9$.
5. $4 \times 6 = 24$, so the quotient is 6.
6. 54.
7. Yes; 2 rolls left.
8. $\square = 7$; $35 \div 5 = 7$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. The known product is $3 \times 7 = 21$.
2. Doubling the number of groups doubles the total: $21 + 21 = 42$.

Problem 2

1. $6 \times 6 = 36$ and $6 \times 2 = 12$.
2. Add the parts: $36 + 12 = 48$, so $6 \times (6 + 2) = 48$.

Problem 3

1. The unknown factor counts how many 7s make 28: $7 \times 4 = 28$.
2. So $28 \div 7 = 4$. Check by multiplying $4 \times 7 = 28$.

Problem 4

1. Use the related fact $45 \div 5 = 9$ to find the missing number 9.
2. Substitute it: $5 \times 9 = 45$ and $45 \div 5 = 9$ are both true.

Problem 5

1. Test Eli: $4 \times 7 = 28$, which is 4 too many.
2. Remove one group of 4: $28 - 4 = 24$; the factor is 6.

Problem 6

1. Ten groups give $10 \times 6 = 60$.
2. Remove one group: $60 - 6 = 54$, so $9 \times 6 = 54$.

Problem 7

1. All trays hold $8 \times 3 = 24$ rolls.
2. After giving out 22 rolls, $24 - 22 = 2$ remain.

Problem 8

1. The unknown factor counts how many 5s make 35: $5 \times 7 = 35$.
2. So $35 \div 5 = 7$. Check by multiplying $7 \times 5 = 35$.

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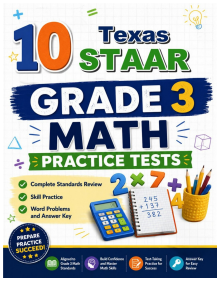

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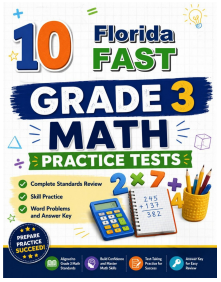

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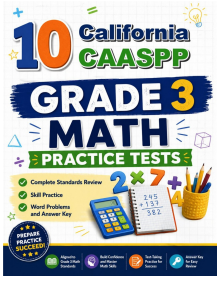

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