Grade 3: Multiplication Facts

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3.OA.C.7 - Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Write a number in each box to make a true equation.

5 × 4 = ☐

36 ÷ 4 = ☐

7 × 8 = ☐

6 × ☐ = 42

Solution

Correct if student writes 20, 9, 56, and 7 in the boxes.

5 × 4 = **20**
36 ÷ 4 = **9**
7 × 8 = **56**
6 × **7** = 42

By the end of third grade, students are expected to know the answers to single-digit products without having to think about the answer. For example, students are expected to just know that 5×4 equals 20 and 7×8 equals 56. In related division problems, like $36 \div 4$, the answers should come easily.

In fact, at the end of third grade, the best way to answer $36 \div 4$ is probably just to remember that $4 \times 9 = 36$. So, $36 \div 4 = 9$.

A next-best way to answer $36 \div 4$ might be to think this way:

> First, $40 \div 4 = 10$.
>
> Then, $36 \div 4$ should be one less than that, because 36 contains one less 4 than 40 does.
>
> So, $36 \div 4 = 10 - 1 = 9$.

It is important that students know their single-digit products and be fluent with related quotients, so that grade 4 and beyond they can solve problems, work with fractions, and calculate answers in cases like 46×37 or $578 \div 17$.

Elaboration on Alignment

There are three distinct kinds of problems represented here: (1) a product (first box, easy; third box, more difficult); (2) a quotient (second box); (3) finding a missing factor by dividing (fourth box). In the first item, the 5 coming first may require some students to turn the fact around to a better-remembered 4 x 5, which can be skip-counted almost instantaneously if not remembered.

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Name: ______________________________

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$36 \div 4 = \square$

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$6 \times \square = 42$