

What's Wrong?

1. What is wrong with the answer?
2. Find a way to obtain the correct answer without starting all over?

$$\begin{array}{r} 59 \\ \hline 12 \overline{) 736} \\ \underline{60} \\ 136 \\ \underline{108} \\ 28 \end{array}$$

Discussion, Suggestions, Possible Solutions

One important idea of division is that the remainder must be less than the divisor. Therefore, in this problem, the remainder of 28 is incorrect. As students think about how to correct this error without re-calculating the whole problem, encourage students to think about problem situations where they might use $736 \div 12$, and how the answer of “59 remainder 28” does not make sense and what we can do with the remainder.

For example, if the problem is a measurement division situation like “736 eggs are being placed into cases that hold 12 eggs in each. How many cases can we fill up?” In this situation, having 28 eggs leftover does not make sense because there are definitely more than 12 needed to fill up a case.

On the other hand, if students can think about a sharing division situation like, “There are 736 baseball cards. If 12 friends share these cards fairly, how many baseball cards will each receive? the remainder of 28 does not make sense as each person can get at least one more card.

In either situation, students may realize that they have to divide 28 by 12, and add the quotient to the (incorrect) quotient of 59 to obtain the correct answer.