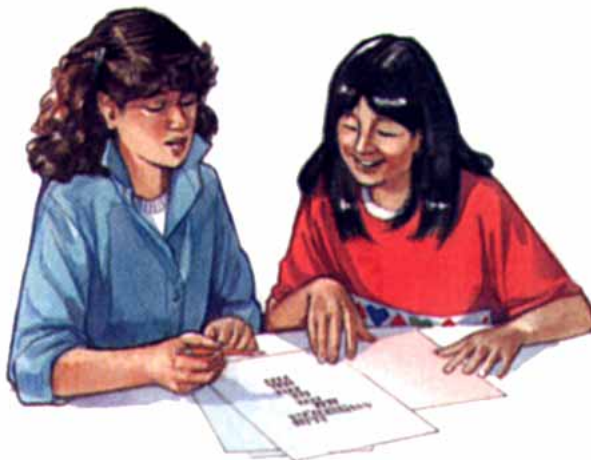


The Problem

Teresa and Sylvia were reviewing long division when they came upon the following problem:

$$\begin{array}{r}
 \text{XX,8XX} \\
 \text{XXX} \overline{) \text{XX,XXX,XXX}} \\
 \underline{\text{XXXX}} \\
 \text{XXXX} \\
 \underline{\text{XXX}} \\
 \text{XXXX} \\
 \underline{\text{XXXX}} \\
 \text{XXXX} \\
 \underline{\text{XXXX}} \\
 \text{0000}
 \end{array}$$



The “X’s” represent digits from 0-9, and any digit may be used more than once. At first they thought that it would be impossible to get only one answer for the problem, however after working on it for quite a while, they were able to determine all the numbers. See if you can solve the problem.

Strategies and Hints

1. Look carefully at the problem. Do you notice anything special? What?
2. Think about what you know about both division and subtraction.
3. Is there anything special about “bringing down” two digits at a time?