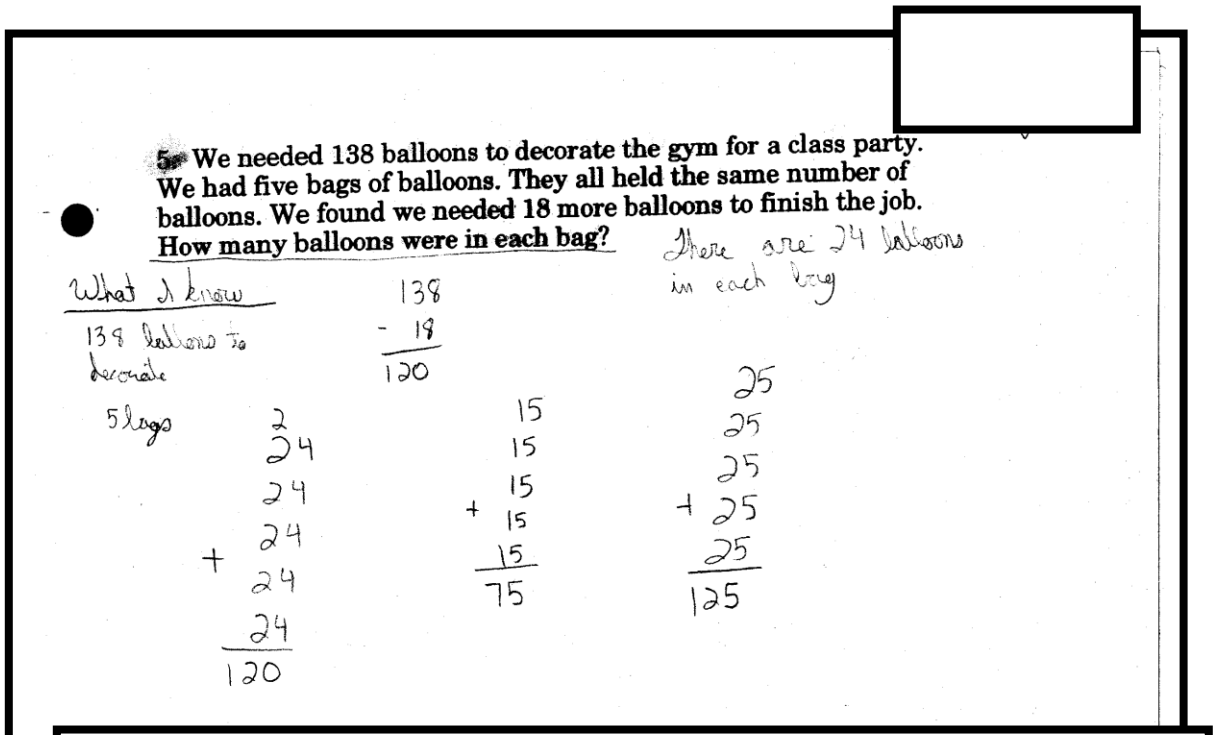


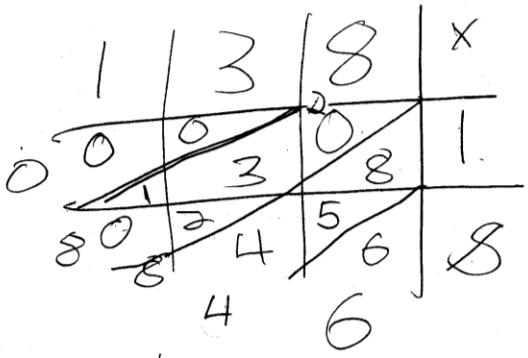
This student's work suggests he has conceptualized the problem. He knows what to do with the 18 extra and has subtracted.
He knows that the solution lies in dividing into 5 equal groups.
He has chosen estimation and addition as the strategies that will help him find the answer.

fifteens is far too low and 5 twenty fives is just little too high.
In fact it is only 5 too much so he moves to 24.

As a teacher I must now decide was my purpose to see if he could make sense of the problem? What feedback will move him to new or deeper understandings of division? Division is the inverse of multiplication. Can I help him see how multiplication is connected here and therefore how he could use it next time?
Can I compare this work to another solution to have students make connections?

5. We needed 138 balloons to decorate the gym for a class party. We had five bags of balloons. They all held the same number of balloons. We found we needed 18 more balloons to finish the job. How many balloons were in each bag?

need 138
gym and class
18 to finish



There are 8846 balloons altogether.

This student has not conceptualized the problem. She has ignored the context. More likely she needs to be encouraged to act out the situation. Re- telling the problem in her own words might help her realize that she could use materials and pictures to make sense of the situation.

A very typical response from students who have only procedural knowledge of mathematics is to take the two numbers in the problem and operate on them.
In this case the class has been working on multiplication as a computation. (No context, just pracising the procedures of multiplying.) She feels comfortable with the lattice method, which the teacher taught the whole class as one way to get to the answer.
The student has set up the format the way the teacher taught it. However there are mistakes in the multiplication (8 x 8 = 56) and in the subsequent additions on the diagonal so the answer is incorrect. It is doubtful she understands the procedure she is applying.

But far more important there is no understanding of the problem communicated. This answer would not make sense even if the procedure were performed correctly.

The notes at the top indicate the student pulled the key numbers:
Need 138
18 to finish *Both phrases should trigger some thinking about maybe I already know my total, not I have to find a total. So we need 138 but we are 18 short, that means we have.....*
However, gym and class are not key pieces of information are they?