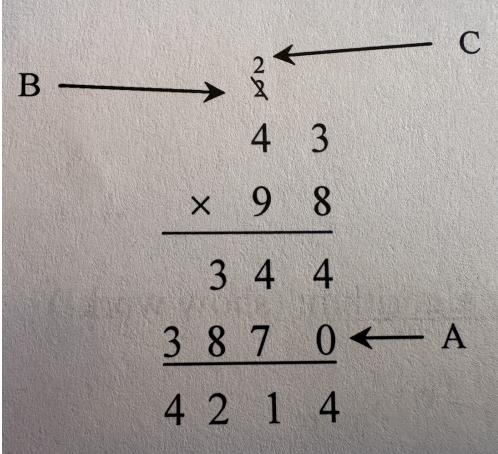


Quiz 3

This is a two-stage quiz. During the first stage, use your knowledge & calculator to take this quiz. You have 15 min. In the second stage, you are now welcome to use your books, notes, and students in the class to retake the same quiz. You have 15 min. to write one solution (with everyone's name on it!) to be turned in for the group. Show your work as you would for a colleague. Partial credit requires reasonable support.

1. We consider the problem $33_{\text{six}} - 14_{\text{six}}$.
 1. [2] Sketch the base pieces to illustrate the computation.
 2. [2] Perform the subtraction. Show any regrouping.
2. A student in TMath 171 class shows how to do multiplication (in base 10) the way that they were taught.
 1. [1] Explain why a 0 was written at location A .
 2. [2] Explain why there is the 2 above the 4 in location B . Why is the 2 crossed out?

The image shows a handwritten multiplication problem in base 10:

$$\begin{array}{r} 43 \\ \times 98 \\ \hline 344 \\ 3870 \\ \hline 4214 \end{array}$$

Annotations are present:

 - Location A is marked with an arrow pointing to the 0 in the tens column of the product (3870).
 - Location B is marked with an arrow pointing to the 2 above the 4 in the tens column of the product.
 - Location C is marked with an arrow pointing to the 2 above the 3 in the tens column of the product.
3. Consider the expression (with subtraction, addition, and multiplication): $50 - 6 + 11 \times 3$
 1. [2] Circle the operation in the expression that should be performed first and perform that operation.
 2. [1] Identify the next operation to be performed.