Alternate algorithms for subtraction assignment:

1. Observe a lesson by doing one of the following two options:

* At the site <http://learner.org/resources/series32.html> Watch #15: Bean Sprouts
* Or in D2L->Content->Readings, read: Second Graders Circumvent Addition and Subtraction Difficulties (auntmary.pdf)

Write a paragraph describing how the teacher in the lesson helps students understand two digit subtraction by inventing their own strategies to solve problems.

2. For the each of the four student-invented strategies discussed in the lecture, show how to use it to solve the two problems below. (If you are confused about how to apply the strategy to a 3-digit problem, you can consult the short videos in the “more resources” page for one example).

a. Solve each problem by taking away in chunks, using place values of the subtrahend

i. 62 – 47 ii. 134 – 87

b. Solve each problem by adding up in chunks, using place value multiples as bridge numbers (show on an open number line)

i. 62 – 47 ii. 134 – 87

c. Solve each problem by shifting the number line (to make the subtrahend easy to subtract) (show on an open number line)

i. 62 – 47 ii. 134 – 87

d. Solve each problem by using negative numbers to subtract

i. 62 – 47 ii. 134 – 87

3. Show how to solve the following problem by using the “trade first” variation on the standard algorithm, and making the trades in left to right order.

642 – 183

4. Show how to solve the following problems using the Equal Additions (European) algorithm

a. 642 – 183 b. 704 – 236