Application with

An Addition Algorithm for Distraction-Proof Addition

#1.

89
76
95
67
58
87
89
95
+70

#2.

89
76
95
67
58
87
89
95
+70

#3.

89
76
95
67
58
87
89
95
+70

#4.

99
62
57
98
87
76
65
58
+34

#5.

65
84
98
57
86
78
64
99
87
+ 77

#6.

32
567
815
79
800
74
+25

7. and so on …

Similar to #6

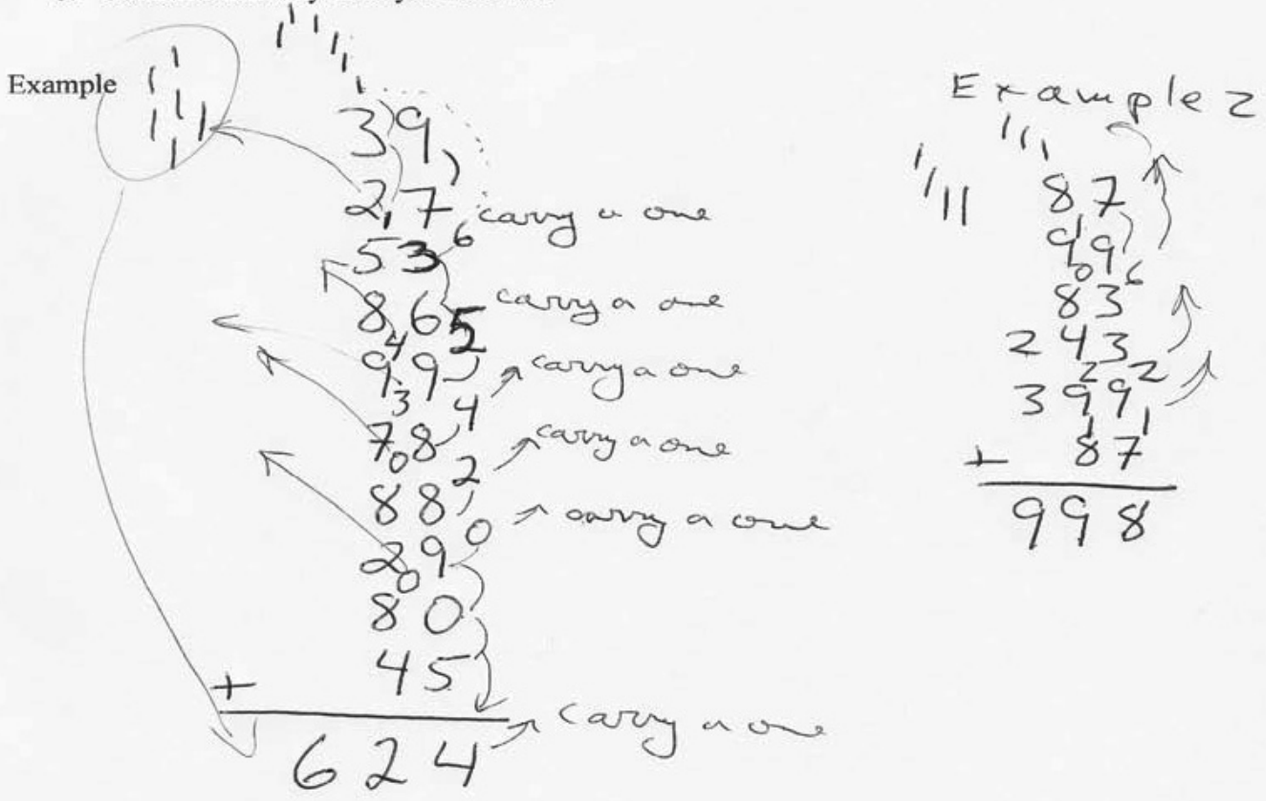
Write each complex procedure as a page for the students to keep in their Knowledge Banks or Playbooks.

"Distraction Proof" Easier Addition

For Adding Columns of Numbers When There Isn't a Calculator Available

Directions:

1. Make sure the numbers to be added are written in a neat, easy to read column.
2. Start adding the units as usual, BUT …
3. As soon as you get a sum of 10 or greater, write the sum's unit digit just to the right and a tiny bit below where you are, AND "carry the one" to the top of the next column to the left.
4. Continue until you reach the end of the column and write your "last" sum's unit digit below the line under the units, and carry the one if there is one.
5. Start with the tens column by "adding in" all the ones you carried.
6. Continue this way until you're done.



Copy Me Teaching
(with Completing the Square)

First, I asked the students to tell me everything they noticed in the completed problem.

To start the unit on solving quadratic equations by completing the square, I followed the critical attributes for the instructional strategy Copy Me Teaching.

Equation: $x^2 + 10x - 39 = 0$

$+39 \quad +39$

$x^2 + 10x \quad = 39$

$x^2 + 10x + c \quad = 39 + c$ **where** $c = \left(\frac{b}{2}\right)^2$ **or ½ the x coefficient quantity squared**

$x^2 + 10x + 25 \quad = 39 + 25$

$x^2 + 10x + 25 = 64$ **Factor the perfect square trinomial on the left side of the equal sign**

So ….

$(x + 5)^2 \quad = 64$

So …

$\sqrt{(x+5)^2} = \pm\sqrt{64}$

$x + 5 \quad = \pm 8$

So …

$x + 5 = 8$ **or** $x + 5 = -8$

$-5 \quad -5 \qquad -5 \quad -5$

So …

$x = 3$ **or** $x = -13$

NOTE: Make sure to stay silent and exaggerate each step. Change color for each step! Encourage students to listen carefully to students and prompt more conversation . Use arrows and gesturing to show where things are going or coming from.

NOTE: Allow time for silent processing and discussion before moving forward with each step, work the same problem again, stopping after each step, and have the students explain in groups of 2 or 3 what they just saw you do with each step.

NOTE: Now, have students work this same problem individually. Have the completed problem on the overhead or work it at the same time on the overhead as the students are working it. Ask the students to double check each of their steps with yours as they do each step.

Lastly, ask students to do a similar problem while double checking your work on the overhead.

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