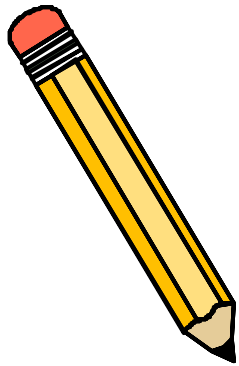


Curriculum-Based Measurement:  
Directions for Administering and Scoring  
CBM Probes in...

## **MATH COMPUTATION**



Excerpt from:

*Curriculum-Based Measurement: A Manual for Teachers*

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### **Administration of CBM math probes**

The examiner distributes copies of one or more math probes to all the students in the group. (Note: These probes may also be administered individually). The examiner says to the students:

*The sheets on your desk are math facts.*

**If the students are to complete a single-skill probe, the examiner then says:** *All the problems are [addition or subtraction or multiplication or division] facts.*

**If the students are to complete a multiple-skill probe, the examiner then says:** *There are several types of problems on the sheet. Some are addition, some are subtraction, some are multiplication, and some are division [as appropriate]. Look at each problem carefully before you answer it.*

*When I say 'start,' turn them over and begin answering the problems. Start on the first problem on the left on the top row [point]. Work across and then go to the next row. If you can't answer the problem, make an 'X' on it and go to the next one. If you finish one side, go to the back. Are there any questions?*

**Say, Start.** The examiner starts the stopwatch.

While the students are completing worksheets, the examiner and any other adults assisting in the assessment circulate around the room to ensure that students are working on the correct sheet, that they are completing problems in the correct order (rather than picking out only the easy items), and that they have pencils, etc.

After 2 minutes have passed, the examiner says *Stop*. CBM math probes are collected for scoring.

### **Scoring**

The following scoring rules will aid the instructor in marking single- and multiple-skill math probes:

- ➔ Individual correct digits are counted as correct.
  - Reversed or rotated digits are not counted as errors unless their change in position makes them appear to be another digit (e.g., 9 and 6).
  
- ➔ Incorrect digits are counted as errors.
  - Digits which appear in the wrong place value, even if otherwise correct, are scored as errors.

Example:

$$\begin{array}{r} 97 \\ \times 9 \\ \hline 8730 \end{array}$$

"873" is the correct answer to this problem, but no credit can be given since the addition of the 0 pushes the other digits out of their proper place-value positions.

- ➔ The student is given credit for "place-holder" numerals that are included simply to correctly align the problem. As long as the student includes the correct space, credit is given whether or not a "0" has actually been inserted.

Example:

$$\begin{array}{r} 55 \\ \times 82 \\ \hline 110 \\ 4400 \\ \hline 4510 \end{array}$$

Since the student correctly placed 0 in the "place-holder" position, it is given credit as a correct digit. Credit would also have been given if the space were reserved but no 0 had been inserted.

- ➔ In more complex problems such as advanced multiplication, the student is given credit for all correct numbers that appear below the line.

Example:

$$\begin{array}{r} 33 \\ \times 28 \\ \hline 264 \\ 660 \\ \hline 924 \end{array}$$

Credit is given for all work below the line. In this example, the student earns credit for 9 correct digits.

- ➔ Credit is not given for any numbers appearing above the line (e.g., numbers marked at the top of number columns to signify regrouping).

Example:

$$\begin{array}{r} ① \\ 46 \\ + 39 \\ \hline 85 \end{array}$$

Credit is given for the 2 digits below the line. However, the carried "1" above the line does not get credit.