

Administration and Scoring of Progress Monitoring Probes: COMPUTATION

Administration

At the given grade level, each computation probe has the same time limit. See the chart below for the time limit at each grade:

Grade	Time Limit
1	2 minutes
2	2 minutes
3	3 minutes
4	3 minutes
5	5 minutes
6	6 minutes

Timing the probe is **CRITICAL** to ensure consistency from probe to probe. You may use a stop watch, or create another way to keep the timing consistent, such as creating an audio tape with “Begin” and “Stop” recorded at the appropriate time interval.

The first time students take the probe, you must teach them how to take it. Fill in the blanks in the directions with the appropriate information from the chart above. The directions tell the students what they need to know about taking the probe. Read the comments in **BOLD** type.

“Today we’re going to learn about a math probe that you will be taking every week. This probe has all kinds of math problems that you are going to learn how to do this year. This is what the probe looks like.” (Hold up the probe or show a transparency on an overhead projector).

“The probe has 25 problems. You many not know how to do some of the problems. That’s OK. I don’t expect you to know how to do all of the problems now. But you’ll be learning how to do them this year. As you learn more and more, your scores on the weekly probe will go up.”

“Each week you’ll have _____ minutes to complete the probe. You need to use your time wisely. Make sure you don’t waste your time on problems that are too hard.

“Here’s where you start the probe. (Point to the top left problem on the probe.) Move across each row from left to right. (Demonstrate) When you come to a problem that is easy for you, do it right away. When you come to a problem that is hard, skip it. Move on to the next problem.”

“When you’ve looked at the whole probe, and done the problems that are easy for you, go back to the beginning and try some of the harder ones. Don’t be afraid to try the harder problems! You might get some credit even if the problem isn’t completely correct. Complete each problem as quickly as possible.” (Ask if there are any questions and check for student understanding.) Now administer the first probe.

Use THESE directions each subsequent time you give a Computation Probe:

“It’s time to take your weekly math probe. As soon as I give you your probe, write your first name, your last name, and the date. After you’ve written your name and the date, turn your paper over and put your pencil down so I’ll know you are ready.”

“I want you to do as many problems as you can. Work carefully and do the best you can. Remember, start at the top left. Work from left to right. Some problems will be easy for you; others will be harder. When you come to a problem you know you can do, do it right away. When you come to a problem that’s hard, skip it and come back to it later.”

“Go through the entire probe doing the easy problems. Then go back and try the harder ones. Remember, you might get points for getting part of a problem right. So, after you’ve done all the easy problems, try the harder problems. Try to do each problem even if you think you can’t get the whole problem right.”

“When I say “Begin,” turn your paper over and start to work. Work for the whole time. You should have enough room to do your work in each block on the page. Write your answers so I can read them! If you finish early, check your answers. At the end of _____ minutes, I will say “Stop.” Put your pencil down and turn your probe paper face down.

Circulate through the room during the test to make sure students are working independently. When time is up, make sure all students put their pencils down immediately and turn their papers face down. Collect the probes.

SCORING the Probes

Answer keys are found in the folder marked Computation Answer Keys for each grade level. As you score, points are awarded for the number of correct DIGITS.

When probes are scored based on the number of correct digits, a point is awarded for each correct numeral in the student’s answer in the correct place value position. For example, the answer to the following problem, 148, has three digits as shown by the ^ below each of the numerals.

Ex 1:

$$\begin{array}{r}
 245 \\
 - 97 \\
 \hline
 148 \\
 \wedge \wedge \wedge
 \end{array}$$

A student who writes the correct answer earns 3 points: 1 point for each digit correctly written in the correct place value position. A student whose answer is partly, but not completely, correct can earn partial credit for the problem. For example, a student whose answer is 158 would earn a score of 2 points, with 1 point for the 1 and 1 point for the 8.

Ex:

$$\begin{array}{r}
 245 \\
 - 97 \\
 \hline
 158 \\
 \wedge \quad \wedge
 \end{array}$$

The primary advantage to scoring problems in terms of number of digits correct is that this measure is more sensitive to student growth since a student can get credit for working parts of a problem correctly.

In general, when scoring the probes, give students the benefit of the doubt. For example, if you are unsure whether the student has written a 4 or a 9, if the digit in the correct answer is 9, then give the student the benefit of the doubt and score the problem on the assumption that the student wrote a 9.

The scoring of integer addition and subtraction is usually straightforward, but some situations need explanation.

Leading Zeros- The answer to the following problem in the answer key is 7. Do NOT penalize a student for writing a leading zero in front of an answer. When scoring in terms of correct digits, the student is awarded a point for writing 7 in the correct place value place, but does NOT receive a point for writing the zero.

$$\begin{array}{r}
 25 \\
 - 18 \\
 \hline
 07 \\
 \wedge
 \end{array}$$

Division Problems: For division problems with remainders, students are expected to write the answer in terms of a quotient and remainder (rather than using decimals or fractions in their answer.) Look at the following problem:

$$\begin{array}{r} \wedge \wedge \wedge \\ 6 \overline{)250R4} \end{array}$$

When scoring the problem in terms of number of digits correct, the student receives one point for each correct numeral, but does NOT receive credit for writing the “R” itself. The “R” is just a place holder.

If a student does a division problem correctly, but does not complete it, award 1 point for each digit in the quotient that is written correctly in the part of the problem that the student completed. For example, the student correctly wrote the 4 in the quotient in the first step, and thus earns one point for the correct digit in that part of the problem.

$$\begin{array}{r} \wedge \\ 6 \overline{)250} \end{array}$$

Decimals: For problems with decimal points in the answer, the decimal point is used for determining whether the numerals in the student’s answer are in the correct place value position, but the decimal point is not counted as a correct digit.

Fractions: In problems with fractions, the horizontal or diagonal bar used to separate the numerator and denominator of the fraction is not counted as a correct digit. Credit is given for all correct digits in the fraction.