

Formative Assessments

Below are the descriptions of some formative assessments used to guide instruction regarding students' ability to effectively critique the reasoning of others. In the summatives I have broken down 'effectively critique the reasoning of others' into four sub-criteria:

- Identifying the accuracy of others.
- Analyzing the thought-process of others.
- Identifying and addressing errors of others.
- Providing constructive feedback to others.

Formative Assessment #1 – Pre-assessment.

On a separate sheet of paper, write down three things that you think are important to critique the reasoning of others. Write down one thing that you think many people include while critiquing others that isn't helpful. Be sure to explain your answers in full sentences.

You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Three important things and one unhelpful thing.	One or none fully explained.	Two fully explained.	Three fully explained.	All four fully explained.

Formative Assessment #2 – Identifying the Accuracy of Others

Grade the following quiz for accuracy using the key provided. Be sure to identify which questions are answered incorrectly and provide an overall score.

You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Accuracy of grading.	Less than three questions scored properly.	Three questions scored properly.	Four questions scored properly.	All questions scored properly.

Quiz:

1) $3x + 4 = 10$ 2) $10x - 2 = -14$ 3) The point that bisects a segment is called the _____

$x = 2$

$x = 1$

midpoint

4) If the $m\angle A = 130^\circ$ and $m\angle B = 50^\circ$, the two angles are _____ 5) $4x + 3 = 2x + 5$

complementary

$x = 3$

Key: 1) $x = 2$ 2) $x = -1$ 3) midpoint 4) supplementary 5) $x = 1$

Formative Assessment #3 – Analyzing the thought-process of others.

Analyze Jonny's explanation of his work. Focus less on his answer and more on his thought process getting there.

Jonny's Task: Your class collected 97 apples on a field trip. An apple basket can hold 12 apples. How many baskets will the class need to bring home all the apples?

Jonny's thought-process: I knew that we had 97 apples total and that every basket would take 12 apples, so I started to subtract 12 from 97. $97 - 12 = 85$. That's one basket. I kept doing that until I couldn't subtract 12 any more. $85 - 12 = 73$, $73 - 12 = 61$, $61 - 12 = 49$, $49 - 12 = 37$, $37 - 12 = 25$, $25 - 12 = 13$, $13 - 12 = 1$. I subtracted 12 eight times, so we need eight baskets.

You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Logic and Effectiveness	Neither logical thought-process nor effectiveness of work is discussed, or one is discussed but without tact.	Either logical thought-process or effectiveness of work is discussed tactfully.	Logical of thought-process as well as effectiveness of work is discussed but without tact.	Logical of thought-process as well as effectiveness of work is discussed tactfully.

Formative Assessment #4 – Identifying and addressing errors of others.

Identify and correct any errors in the work below. For each error corrected, write a sentence describing the error and how to avoid it.

1) $5x + 7 = 8$ $-7 \quad -7$ $5x = 1$ $\div 5 \quad \div 5$ $x = 5$	2) $26 + 3x = 5$ $-26 \quad -26$ $3x = 21$ $\div 3 \quad \div 3$ $x = 7$	3) $12x + 3 = 2x - 23$ $-2x \quad -2x$ $10x + 3 = -23$ $-3 \quad -3$ $10x = -20$ $\div 10 \quad \div 10$ $x = -2$	4) $25 = 7 - 9x$ $-7 \quad -7$ $18 = -9x$ $\div -9 \quad \div -9$ $-2 = x$	5) $14 + 4x = 12$ $-14 \quad -14$ $4x = -2$ $\div 4 \quad \div 4$ $x = .5$
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You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Errors Identified and corrected	More than two errors were not identified or accurately corrected.	Two errors were not identified or accurately corrected.	One error was not identified or accurately corrected.	All errors identified and accurately corrected.
Descriptions	More than two errors were not properly described.	Two errors were not properly described.	One error was not properly described.	All errors properly described.

Formative Assessment #5 – Providing constructive feedback to others.

With your partner, write instructions to someone else about how to effectively critique others. Then, trade papers with another partnership. Below their work, write what you would change about their instructions. Trade with a different partnership. Below their work, write about the changes the second group made. Do you agree with them, or do you think the first group had it right? Then, find your original explanation and write a reflections on the what the other groups had to say. What can you take away from their explanations to improve your own critiquing?

You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Feedback Provided	Feedback is neither constructive nor respectful.	Feedback is constructive but not respectful -or- Feedback is respectful but not constructive.		Feedback provided is constructive and respectful.

Formative Assessment #6 – Providing constructive feedback to others.

- On your note card explain one positive and one negative thing about the displayed critique. How would you fix the negative? How will you try to incorporate the positive into your own critiquing? Be sure to explain your answers in full sentences.

Displayed critique: Your work here is really good, but you made a mistake here. You should divide by 4, not multiple by 4. That way your answer will be 5, not 80. You almost had it.

You will be graded on the following rubric:

	Unsatisfactory 0-1pt.	Fair. 2 pts.	Satisfactory 3 pts.	Excellent 4 pts.
Positive and Negative	Neither positive nor negative identified.	Positive or negative appropriately identified, but not both.	Positive and negative appropriately identified.	Positive and negative appropriately identified. Method to incorporate positive described.