Mathematics Problem Solving Tips

(Unofficial: to be used as a support for students as they learn to use the official scoring guide)

You may use manipulatives or a calculator to work on your problem.

To receive the highest score in each of the five areas, you will want to be certain your work SHOWS each of these parts of a successful solution.

(1) MAKING SENSE OF THE PROBLEM – "WHAT"

- I turned the word problem into numbers and/or symbols.
- The mathematics I used fits the problem.

(2) REPRESENTING AND SOLVING THE PROBLEM – "HOW"

- My mathematical problem solving skills/strategies fit the problem.
- I showed all my work (diagrams, pictures, models, numbers and/or symbols).

(3) COMMUNICATING AND REASONING – "CONNECTING PATH"

- The path leading to my complete solution has a no gaps for the reader to fill in.
- Labels are appropriate and accurate (e.g., square units vs units).

(4) ACCURACY – "CORRECTNESS"

- My answer matches what the problem was asking.
- My final answer is complete and justifiable.
- *I extended my work by asking a new questions leading to new problems.*

(5) REFLECTING AND EVALUATING – "DEFENSE"

- I stated the solution in the context of the problem (correct units).
- I showed that my interpretation of the problem, concepts, strategies, and calculations were reasonable and accurate.
- *If possible, I worked the entire problem a second way.*

RECAP: ***Show your answer and all of your work so everything is clear to the readers.***