Formative Assessment – Student Self-Monitoring (PaTTAN, 2015)

|  |  |  |  |
| --- | --- | --- | --- |
| **Mathematics**  **(alphabetized; there is no order of importance taken from NRC, 2001)** | **Target** | **Emerging and Developing** | **Beginning** |
| **Adaptive Reasoning**  **- The capacity for logical thought, reflection, explanation, and justification (NRC, 2001)** | My approach to the problems are justified mathematically and I can explain how to solve the problems and why | I understand the mathematics behind how I solve problems but some things are still confusing | I do not understand how to solve the problems or why I am doing certain steps |
| **Conceptual Understanding**  **- an integrated and functional grasp of mathematical ideas. Students with conceptual understanding know more than isolated facts and methods (NRC, 2001)** | The way I am solving problems is connected to how I have solved other problems. I can show and explain these connections. | The way I solve these problems reminds me of similar approaches to other problems but I am not fully certain as to the connection. | I do not understand these problems and the approach shown seems new to me. |
| **Procedural Facility**  **- the skill in carrying out procedures flexibly, accurately, efficiently, and appropriately (NRC, 2001)** | My steps to problem solving are accurate and efficient and I can adjust my steps based on the problem type | My steps to problem solving are usually accurate but I do not understand how to adjust my steps | My steps are not accurate |
| **Productive Disposition**  **- the inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy (NRC, 2001)** | I find learning this mathematics skill important to my future and I keep working on math problems until I solve them accurately and understand why | I find learning this mathematics skill important but I sometimes give up on solving a problem if it seems hard or I get confused | I don’t find learning this mathematics skill important |
| **Strategic Competence**  **- the ability to formulate, represent, and solve mathematical problems (NRC, 2001)** | I can develop and solve these mathematics problems using an appropriate strategy | I can use a strategy that is provided to me but I have difficulty developing or choosing a strategy | I cannot determine what strategy to use with different mathematics problems |