

STUDENT NAME _____ SUBJECT _____

MP 7: Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

	4 - Advanced	3 – Competent	2 – Limited	1 - Emerging
Discerns Structures in Math	Student can look at a problem in and unconventional way, relying on their understanding of mathematical structure, to find the most efficient means to problem solve. When looking at the problem: solve for x , $3(x-2)=9$, rather than solving by distribution and division, a student would recognize that the equation is saying 3 times something is 9.	Student can look at a problem and understand the mathematical structures within, and often find the most efficient means to problem solve.	Student needs support to see the structures within a problem, but can apply properties once explained. Student may not utilize the most efficient means to problem solve.	Student cannot apply understandings of structures with regularity or requires continued prompting.
Week 1				
Week 2				
Week 3				
Construction & Deconstruction	Student can see complex things as being both singular objects, as well as deconstructed and composed of several objects consistently.	Student can see complex things as being singular objects, as well as deconstructed and composed of several objects most of the time.	Student struggles with either construction or deconstruction of a complex thing, but is able to be successful with added supports.	Student cannot visualize complex things as being both singular objects and made up of multiple parts.
Week 1				
Week 2				
Week 3				
Finding Patterns	Student is able to independently recognize patterns that exist or arise and apply the properties of the pattern to solve this problem and future problems more efficiently.	Student is able to independently recognize patterns that exist or arise in a mathematical situation, and applies the pattern in problem solving with moderate effectiveness.	Student can identify elements of a pattern that exists or arises. Student requires support in using the pattern to solve the problem efficiently.	Student cannot identify the pattern.
Week 1				
Week 2				
Week 3				

INSTRUCTIONAL NEXT STEPS: