Note for Vanessa: I tried to make this rubric align as closely as I could to the one for the course but I don't know how well that worked... Any score below 7 is unsatisfactory. Scores of 7 to 8 are acceptable. 8 to 9 is generally good and 9 and above is very good or teacher level. If you have any questions about the rubric or the grading I did feel free to call me.

## Rubric for Domesteroids Homework 2:

## 9-10

The student has a clear understanding of the concept of a sequence and can identify the pattern (either by using a visual model or by directly stating it as an expression) that is illustrated in the question. They have correctly answered the question "Why can there not be exactly 4,117 minimal asteroids at the end of the sequence?" They have also correctly written the entire formula (with possibly minor details missing) for the number of asteroids as a function of the number of charges of the B6100.

## 7-9

The student has some valid mathematical notions about sequences and the pattern but has missed some clarifying details. They have correctly answered (or have correct methods of answering) the question of "Why can there not be exactly 4,117 minimal asteroids at the end of the sequence?" They have written a formula that is mostly correct., but may lack some explanation of reasoning or have non-sequencerelated mathematical errors or misinterpretations.

## 5-7

The student has missed important details about sequences or the pattern but has made some non-trivial and mostly correct comments about sequences (or the pattern) in their work even if they are somewhat unrelated. They have made an attempt at the question of "Why can there not be exactly 4,117 minimal asteroids at the end of the sequence?" but their reasoning is unclear or incorrect. Formula is absent from their work or is seriously incorrect.

## 0-5

The student did not attempt the problem set or failed to demonstrate appreciable knowledge about sequences. They do not understand or see the pattern and have failed to correctly answer the question of "Why can there not be exactly 4,117 minimal asteroids at the end of the sequence?" Formula may not be present. If a formula is present, it is not relevant and/or seriously incorrect.

