|  |  |
| --- | --- |
| **The Second Question – Math Talk Edition**Answer the Question…Question the Answers |  |
| 1. **Mathematical Problem Solving**
2. How would you describe the problem in your own words?
3. How would you describe what you are trying to find?
4. What do you notice about…?
5. What information is given in the problem?
6. Describe the relationship between the quantities?
7. Describe what you have already tried. What might you change?
8. Talk me through the steps you’ve used to this point.
9. What steps in the process are you most confident about?
10. What are some other strategies you might try?
11. What are some other problems that are similar to this one?
12. How might you use one of your previous problems to help you begin?
13. How else might you organize…represent..show..?
 | 1. **Mathematical Communication**
2. What mathematical evidence would support your solution?
3. How can we be sure about…? How could you prove that…?
4. Will it still work if…?
5. What were you considering when…?
6. How did you decide to try that strategy?
7. How did you test whether your approach worked?
8. How did you decide what the problem was asking you to find? (What was unknown?)
9. Did you try a method that did not work? Why didn’t it work? Would it ever work? Why or why not?
10. What is the same and what is different about…?
11. How could you demonstrate a counter-example?
12. What reading strategies can you use to gain a deeper understanding of the task and its solution?
 |
| 1. **Mathematical Reasoning**
2. Will the same strategy work in other situations?
3. Is this always true, sometimes true, or never true?
4. How we prove that…?
5. What do you notice about…?
6. What is happening in this situation?
7. What would happen if…?
8. Is there a mathematical rule for…?
9. What predications or generalizations can this pattern support?
10. What mathematical consistencies do you notice?
11. What do the numbers in the problem represent?
12. What is the relationship of the quantities?
13. How is \_\_\_\_\_ related to \_\_\_\_\_?
14. What is the relationship between \_\_\_\_ and \_\_\_\_?
15. Hat does \_\_\_\_ mean to you? (e.g., symbol, quantity, diagram)
16. What properties might we use to find a solution?
17. How did you decide that you needed to use …?
18. Could we have used another operation or property to solve this task? Why or why not?
 | 1. **Mathematical Connections**
2. What observations do you notice about…?
3. What do you notice when…?
4. What parts of the problem might you eliminate…simplify…?
5. What patterns do you find in …?
6. How do you know if something is a pattern?
7. What ideas that we have learned before were useful in solving this problem?
8. What are some other problems that are similar to this one?
9. How does this relate to…?
10. In what ways does this problem connect to other mathematical concepts?
 |

**The Second Question – Math Talk Edition**

|  |  |
| --- | --- |
| 1. **Mathematical Representations**
2. What number model could you construct to represent the problem?
3. What are some ways to represent the quantities?
4. What’s an equation or expression that matches the diagram…number line…chart…table…?
5. Where do you see one of the quantities in the task in your equation or expression?
6. Would it help to create a diagram, graph, table…? Why?
7. What are some ways to visually represent…?
8. What formula might apply in this situation? Explain your thinking?
 | 1. **Use Appropriate Tools Strategically**
2. What mathematical tools could we use to visualize and represent the situation?
3. What information do you have?
4. What do you know that is not stated in the problem?
5. What approach are you considering trying first? Why?
6. What estimate did you make for the solution?
7. In this situation it would be helpful to use…a graph…number line… ruler… diagram… calculator…manipulative? For what pupose?
8. Why was it helpful to use…?
9. What can using a \_\_\_ show us that…may not…?
10. In what situations might it be more informative or helpful to use…?
 |
| 1. **Mathematical Precision**
2. What mathematical terms apply in this situation?
3. How did you know your solution was reasonable?
4. Explain how you might show that your solution answers the problem?
5. Is there a more efficient strategy? Why does this approach work?
6. How are you showing the meaning of the quantities?
7. What symbols or mathematical notations are important in this problem?
8. What mathematical language…definitions…properties can you use to explain…?
9. How could you test your solution to see if it answers the problem?
 | **H. My PLC questions include:** |

|  |  |
| --- | --- |
| **Code** | **Why is this a worthwhile question?** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |