

# Answer the Question...Question the Answers...



<p><b>A. Promote Problem Solving</b></p> <ol style="list-style-type: none"> <li>1. What do you need to find out? What information do you have?</li> <li>2. What strategies are you going to use?</li> <li>3. Will you do it mentally? With pencil and paper? Using a number line?</li> <li>4. Will a calculator help?</li> <li>5. What do you think the answer or result will be?</li> </ol>	<p><b>B. Getting Students Thinking</b></p> <ol style="list-style-type: none"> <li>1. How would you describe the problem in your own words?</li> <li>2. What facts do you have? What do you know that is not stated in the problem?</li> <li>3. How did you tackle similar problems?</li> <li>4. Could you try it with simpler numbers? Fewer numbers? Using a number line?</li> <li>5. What about putting things in order?</li> <li>6. Would it help to create a diagram? Make a table? Draw a picture?</li> <li>7. Can you guess and check?</li> <li>8. Have you compared your work with anyone else? What did other members of your group try?</li> </ol>
<p><b>C. Checking Along the Way</b></p> <ol style="list-style-type: none"> <li>1. Can you explain what you have done so far? What else is there to do?</li> <li>2. Why did you decide to use this method?</li> <li>3. Can you think of another method that might have worked?</li> <li>4. Is there a more efficient strategy?</li> <li>5. What do you notice when...?</li> <li>6. Why did you decide to organize your results like that?</li> <li>7. Do you think this would work with other numbers?</li> <li>8. Have you thought of all the possibilities? How can you be sure?</li> </ol>	<p><b>D. Going for Deeper Thinking</b></p> <ol style="list-style-type: none"> <li>1. Why is that true?</li> <li>2. How did you reach that conclusion?</li> <li>3. Does that make sense?</li> <li>4. Can you make a model to show that?</li> </ol>
<p><b>E. Promoting Mathematical Reasoning</b></p> <ol style="list-style-type: none"> <li>1. Is that true for all cases? Explain.</li> <li>2. Can you think of a counterexample?</li> <li>3. How would you prove that?</li> <li>4. What assumptions are you making?</li> </ol>	<p><b>F. Fostering Student Reflection</b></p> <ol style="list-style-type: none"> <li>1. How did you figure that out?</li> <li>2. How did you think about it?</li> <li>3. Does your answer seem reasonable? Why or why not?</li> <li>4. Can you describe your method to us all? Can you explain why it works?</li> <li>5. What if you had started with... rather than...?</li> <li>6. What if you could only use...?</li> </ol>

	<p>7. What have you learned or found out today?</p> <p>8. What are the key points or big ideas in this lesson?</p>
<p><b>G. Encouraging Conjecture</b></p> <ol style="list-style-type: none"> <li>1. What would happen if...?</li> <li>2. Do you see a pattern? Can you explain the pattern?</li> <li>3. What are some possibilities here?</li> <li>4. Can you predict the next one? What about the last one?</li> </ol>	<p><b>H. Making Sense of Mathematics</b></p> <ol style="list-style-type: none"> <li>1. Who would like to share their thinking?</li> <li>2. Who used this strategy to solve it?</li> <li>3. What do you think about what _____ said? Do you agree? Why or why not?</li> <li>4. Does anyone have the same answer but a different way to explain it?</li> <li>5. Do you understand what _____ is saying?</li> <li>6. Can you convince the rest of us that your answer makes sense?</li> </ol>
<p><b>I. Making Connections</b></p> <ol style="list-style-type: none"> <li>1. How does this relate to...?</li> <li>2. What ideas that we have learned before were useful in solving this problem?</li> <li>3. What uses of mathematics did you find in the newspaper last night?</li> <li>4. Can you give me an example of...?</li> </ol>	<p><b>J. What other questions would you add to the list?</b></p>

**My questions to ask/answer with this mathematical exploration:**

---

Code	Why is this a worthwhile question?