






## Solving Math Problem With the Singapore Model Drawing Method



STEPS	PHASE (main actions)	DESCRIPTORS
1.	You <b>READ</b> to <b>UNDERSTAND</b> the <b>TEXT</b> of the problem  <small>(Image courtesy of gesadaphorn, www.freedigitalphotos.net)</small>	<b>Read</b> the problem first to get the context (e.g., What's the problematic situation?)
2.		<b>Read</b> the problem again and <b>identify</b> : a. THE GIVENS (the known quantities) b. WHAT NEEDS TO BE FOUND (the unknown quantities).
3.		Read the problem again & <b>separate the items</b> you wish to represent visually. Use a slash to help you.
4.	You <b>DRAW</b> the bar <b>MODEL</b> to help you see the problem and solve it. 	<b>Represent one chunk</b> by at least <b>one rectangle or bar</b> . Label it with the known value or mark it as an unknown (use a "?" or variable").
5.		Return to the text to check the mathematical <b>relationships</b> between the bars of the model.
6.		<b>Adjust the size of the bars</b> to illustrate the relationships*. Does one or a group of bars find in others? How do they compare with each other? *You may go back and re-read the problem.
7.	You <b>TRANSLATE</b> THE VISUAL into equations & solve them.  <small>(Image courtesy of samuiblue, www.freedigitalphotos.net)</small>	<b>Translate</b> the relationships between <b>the bars</b> into mathematical sentences ( <b>equations</b> ).
8.		<b>Compute the equations</b> and add the found information to the bar model.
9.		Repeat steps 5-7 until you solved the problem and have the <b>solution</b> .
10.		<i>Does the solution make sense? Is it a reasonable number in the problem? In real life?</i>
11.		<b>State the solution</b> clearly, using a complete sentence that answers the question of the problem.

