Description:

After students figure out what type of problem they are dealing with, they often must then decide what principle or principles to apply in order to solve the problem. This technique focuses on this step in problem solving. It provides students with a few problems and asks them to state the principle that best applies to each problem.

Step-by-Step Procedure:

1. Identify the basic principles that you expect students to learn in your course. Make sure focus only on those that students have been taught.

2. Find or create sample problems or short examples that illustrate each of these principles. Each example should illustrate only one principle.

3. Create a What's the Principle? form that includes a listing of the relevant principles and specific examples or problems for students to match to those principles.

4. Try out your assessment on a graduate student or colleague to make certain it is not too difficult or too time-consuming to use in class.

5. After you make any necessary revisions to the form, apply the assessment.