

MPS 14 Creating the Look back and extending experiences

1.1 given a term listed under "concepts introduced", you should be able to give a word definition, list pertinent characteristics and cite an example.

3.1 given a problem solved and a solution, you will be able to list at least four components that you could change to create a new problem **and** still be able to solve it based on the *same fundamentals*.

3.2 as in 3.1, you will be able to list the fundamental principles that were used to solve the problem. These will be judged 90 % correct by the tutor.

3.3 given 3.2, you will be able to list at least 10 major prerequisite ideas.

3.4 given a series of problem statements, you will correctly classify those as being similar based on the underlying fundamentals and **not** by the similarity of surface descriptors in the problem statement.

5.1 given 3.1 above, but for each of the identified components, generate at least 20 alternatives.

5.2 given a problem solved and a solution, you will be able to write out a new problem statement (and solution) that will be judged by peers or/and by tutor to be 100% based on the same fundamentals.

5.3 as in 5.2, but you may include up to 30% new fundamentals that are prerequisite knowledge.

6.1 given a problem solved and a solution, and given one new problem statement, you will be able to list the fundamentals for the new problem statement and judge whether the new problem can be solved using the same fundamentals as used in the original problem.

Concepts introduced

Pattern recognition, fundamentals, prerequisite, surface cosmetics for a problem statement, elaboration.

MPS 14: Create the Look back and extending experiences: Example assessment tasks:

1. Create four statements for problems which are based on the same fundamental principles as the problem and solution given in Table 1.
2. Given the 15 problem statements in Table 2, classify these based on "similarity" of the underlying fundamentals. Within each class indicate the extent to which the solutions to the problems would be similar.