CREATE MATHEMATICS PROBLEM

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1

Type.

Story problem, puzzle, logical, algorithmic

2

Beginning State.

Known and unknown information

3

Goal State.

What must be found? Condition, terms, rule, or some note.

4

Transformation Function.

Operation, Formula, existing algoritm.

COMPONENTS

PROBLEM 1

Component	Description
Type	Story problems
Beginning state	**Known information** • Mr. Spock want to buy 3 hats. • The price of a hat in Good-Shop is $5 more expensive than Fever-Shop. • Fever-Shop gives 10% discount for the purchase of each hat. Good-Shop gives 60% discount for the second purchase of each hat. **Unknown information** • Price of a hat in both store
Goal state	Which shop has the cheapest total price?
Transformation function	Arithmetic operation

Mr. Spock want to buy 3 hats. The price of a hat in Good-Shop is $5 more expensive than Fever-Shop. Fever-Shop gives 10% discount for the purchase of each hat. Good-Shop gives 60% discount for the second purchase of each hat. Which shop has the cheapest total price?
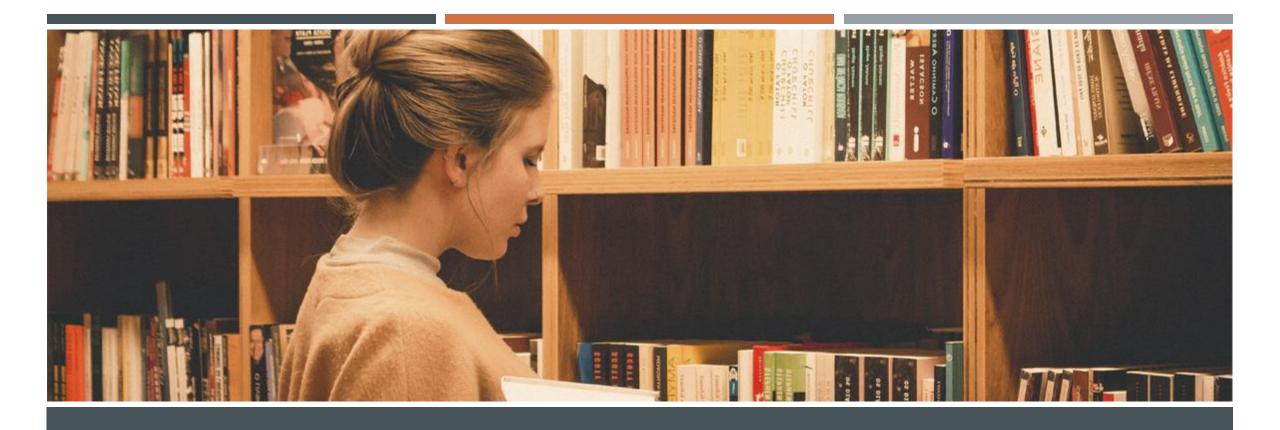
PROBLEM 2

Component	Description
Type	Puzzle
Beginning state	<u>Known information</u> Nine dot array • • • • • • • • • <u>Unknown information</u> -
Goal state	Can you join all nine dots using four straight lines without lifting your pencil from the paper?
Transformation function	Visualization, drawing line

TASK 2

1. Create well-structured problems and ill-structured problems.
2. Each type consist 3 problems (2 problem based on the topic and 1 free problem).
3. Use template to present the problems.
4. The problems must suitable for elementary school student.
5. Give solution for every problem by using Polya's problem solving strategy.
6. The solution must suitable for elementary school student cognitive development.

THANK YOU!