

**MAKE A
TABLE**

**DRAW A
PICTURE**

**GUESS AND
CHECK**

**LOOK FOR A
PATTERN**

**SOLVE A
SIMPLIFIED
PROBLEM**

ACT IT OUT

**WORK
BACKWARDS**

**DRAW A
GRAPH**

**CREATE A
LIST OF
QUESTIONS**

HEURISTIC
CARDS

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SUMMARIZER

- What information are we given?
- What are we trying to figure out?
- What have we accomplished so far?
- What is left to be done?

HEURISTIC MANAGER

- What heuristics are the most likely to help us solve the problem?
- How can we use these heuristics?

QUESTIONER

- Can the problem be broken up into sub-questions?
- Are there what, why, or how, questions that we can ask?
- Are the questions we are asking likely to lead to the correct answer?

CRITICAL FRIEND

- Are we staying on task?
- Is there a more efficient method than the one we are currently using?
- What mistakes have been made? What can we learn from these mistakes?

SCRIBE

- How can we write down our work?
- How can we organize our work to ensure we learn from our mistakes?

PRESENTER

- What information is important to share with somebody wanting to understand the problem and how we solve it?

MEDIATOR

- Do group members have differences of opinions?
- Are the differences related to the problem?
- Is there a way to compromise?

TASK MANAGER

- What tasks need to be accomplished to solve the problem?
- What is our current progress on accomplishing these tasks?
- Can any of these tasks be accomplished simultaneously?

MANIPULATIVE MANAGER

- What manipulatives can help us?
- How can we find, make, or draw these manipulatives?

ROLE
CARDS

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**MAKE AN
ORGANIZED
LIST**

**WRITE AN
EQUATION**

**USE A
FORMULA**

**IDENTIFY
SUB-GOALS**

**MAKE A
MODEL**

**THINK OF A
RELATED
PROBLEM**

HEURISTIC
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