Math – Problem Solving Strategies
Hartley-Melvin-Sanborn CSD
Grade Level/Course Benchmarks

Benchmark 1 - Apply and adapt a variety of appropriate strategies to solve problems. Students will recognizebe skilled when various strategies are appropriate to use and then know how to use them. (Standard 4)

These strategies include (from MathCounts):
- Compute or Simplify (C)
- Use a Formula (F)
- Make a Model or Diagram (M)
- Make a Table, Chart or List (T)
- Guess, Check & Revise (G)
- Consider a Simpler Case (S)
- Eliminate (E)
- Look for Patterns (P)

Benchmark 2 - Build new mathematical knowledge through problem solving by using the following steps: (Standard 4)
- **FIND OUT** Look at the problem.
  - Have you seen a similar problem before?
  - If so, how is this problem similar? How is it different?
  - What facts do you have?
  - What do you know that is not stated in the problem?
- **CHOOSE A STRATEGY** How have you solved similar problems in the past?
  - What strategies do you know?
  - Try a strategy that seems as if it will work.
  - If it doesn’t, it may lead you to one that will.
- **SOLVE IT** Use the strategy you selected and work the problem.
- **LOOK BACK** Reread the question.
  - Did you answer the question asked?
  - Is your answer in the correct units?
  - Does your answer seem reasonable?

Benchmark 3 - Solve problems that arise in mathematics and in other contexts
Students will make mathematical problems that apply directly to decisions that they are currently required to make. (Standard 6)

Benchmark 4 - Monitor and reflect on the process of mathematical problem solving
Students will use metacognition (thinking about thinking) to reflect on their own preferences regarding problem solving. (Standard 6)

Revised: November, 2007