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Online Problem Solving
9/4/18

1. Which problems did you work through?

   The problems I worked through were Entrapment, Wolf, Sheep, & Cabbage, and the Trio Match game.

2. Which problem was the easiest to solve?

   The Trio Match Game was the easiest to solve.

3. Why was it easy to solve?

   This game was straight forward to play. The instructions were clear and easy to follow.

4. What type of problem was it (see Kirkley, 2003 article pg. 8)? Explain.

   This was a moderately structured problem. There was more than one way to score points and win the game. You are using strategy to win the game. Where you place a piece of the game depending on the color and shape of it will determine what your next move must be. Each move will affect the next one.

5. What strategy did you use to solve the problem?

   I looked at the shapes and colors of the piece that was next in line and decided to do as many combinations of the what would give me 400 points which was different shape and different colors.

6. How did you develop this strategy?

   I realized that I only had a limited number of pieces in the game, so I wanted to make the most of what I had available to me. I wanted to get the highest score possible and it was with this strategy that I got a high score of 3700.

7. What declarative knowledge was needed to solve this problem?

   The declarative knowledge that was needed to solve this problem was

knowing that if you lined up 3 different shapes that were different colors from each other you would score 400 points.

8. What procedural knowledge was needed to solve this problem?

    The procedural knowledge that was needed to solve this problem was the strategy that you came up with to get as many points possible. You wanted to get the highest score without having game over which was 400 points in making a line of different shapes with different colors.

9. Which problem was the most challenging for you to solve?

    Entrapment was the most challenging game for me to solve.

10.   Why was it difficult to solve?

    It required critical thinking to solve and was not an easy game to play. I tried many strategies, but it was still difficult for me to solve the game.

11.   What type of problem was it (see Kirkley, 2003 article pg. 8)? Explain.

    This was a moderately structured problem. Kirkley states, "Problems that require varying strategies and adaptations to fit particular contexts." (8) This problem required you to manipulate the game pieces in different ways to solve it.

12.   What strategy did you use to solve the problem?

    The strategy that I used to solve the problem was to try to create a grey triangle around the red triangles to get them to bisect each other.

13.   How did you develop this strategy?

    I read the instructions and tips on how to solve this problem and it was noted that most of the red circles are in the shape of a form of a triangle so then the best way to hit all of the targets is to form a triangle.

14.   What declarative knowledge was needed to solve this problem?

    The declarative knowledge that was needed to solve this problem was

to know that if you formed a triangle with the grey dots then the red dots will be intersected.

15.   What procedural knowledge was needed to solve this problem?

The procedural knowledge that was needed to solve this problem was to know that there was "varying strategies and adaptations to fit particular contexts" (8). You had to realize that this is a game of strategy and you would have to move the grey dots around until you can manipulate it into hitting all 3 of your targets.

Reference:

Kirkley, J. (2003). Principles for teaching problem solving. *Plato Learning.* (Technical Paper #4).