

Homework 13

Due in class on Tuesday, October 18th.

To read:

1. Download and read the excerpt of the book “How to Solve It” by G. Polya. It is available on our course website at:

bohr.physics.berkeley.edu/hal/teaching/sci127Fa16/notes/PolyaHowtoSolveItExcerpt.pdf

I’m only asking that you read pp 1-23. I’ve included the final section More Examples (pp 24-33) just in case you’d like to see more examples of what is being discussed.

2. Download and read part of the paper “Learning to Think Mathematically” by Alan Schoenfeld. Please read from p19 of the pdf (p 352 of the article) to the end of the article. In particular, you can start at the heading “Problem Solving Strategies (Heuristics)”. Of course, you should feel free to read the whole article, but the beginning is more directed for education scholars and isn’t at the heart of what I’d like to discuss with you, so don’t feel obliged to do so. You can download the article at:

bohr.physics.berkeley.edu/hal/teaching/sci127Fa16/notes/SchoenfeldLearningtoThink.pdf

To hand in:

1. Encapsulate Schoenfeld’s problem solving strategy in a few sentences or a paragraph.

Think of a non-mathematical problem solving situation where these ideas would be useful. Describe the situation and explain how you would apply these techniques to better your approach to the problem.