Welcome to CMSC131
What is computing?
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Image from https://onlinemathhomework.wordpress.com/2013/02/22/how-to-find-the-square-root/
What is computer science?

- Computer science is not programming
- Computer science is a science, not a craft

- What problems can be solved (efficiently) through computation? [theory]
- How can problems be framed so they can be solved efficiently? [design]
- How are solutions implemented on specific hardware/software? [programming]
What is programming? versus
CMSC131 goals/outcomes

By the end of the class you will be able to:

- Recall definitions of key terminology related to programming and computing
- Demonstrate the ability to write declarative statements and use operators, conditional statements, and loops to solve small, specific tasks
- Trace given sections of code to predict the output and to illustrate what happens in the stack, heap, and metaspace of computer memory
- Demonstrate the ability to go from a problem expressed in a natural language to writing working and well-designed code that solves that problem and can be used by other programmers as part of a larger system
- Describe how a computer, code, and data are organized and how that impacts the execution of programs
Class resources

- ELMS - http://myelms.umd.edu/courses/1177847

Piazza

- Pooja's story: https://piazza.com/about/story
Assignments/grading

- ELMS/Socrative exercises 5%
- Lab quizzes/Coding exercises 8%
- Projects 25%
- Midterms 30%
- Final 32%
  - 100%

- IMPORTANT: exams make up 62% of the grade
- Everything else are fairly low-stakes exercises to prepare you to do well on exams!!!
Final thoughts

- Partner/group work encouraged (within limits)
- Class pace – very fast

- Welcome to CMSC 131!