

Worksheet Day 1: Mathematical Exploration

January 16, 2018

Goal of this activity: *To explore the skills and strategies that go into the creative process of conjecture and proof.*

Your mission, should you choose to accept it, is to

1. Make an interesting conjecture that relates the number of edges, vertices, and faces of a polyhedron.
2. Prove the statement.
3. Record your observations about how the process works.
4. You may **not** look up things on your phone.

Some inspiration:

- “If I had an hour to solve a problem I’d spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.” – Albert Einstein
- “Any time scientists disagree, it’s because we have insufficient data.” – Neil deGrasse Tyson.
- “From where we stand the rain seems random. If we could stand somewhere else, we would see the order in it.” – Tony Hillerman, *Coyote Waits*
- “I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.” – Abraham Maslow
- “It is better to solve one problem five ways than to solve five problems one way.” – George Polya
- “There ain’t no rules around here! We’re trying to accomplish something!” – Thomas Edison