

# Midterm Review

Topics are presented as subjects of discussion

# Fair game

- Ch 1-3 BTB
- The digital age
- Bits and Gates
- Snap exercises

# Ch 1 BTB

- Exponential growth
  - What is exponential growth?
  - Moore's Law
- Claude Shannon
  - What is he famous for?
- Review the 7 koans of bits from the slides
- What is a bit?

# Ch 2 BTB

- Re-identification
- Digital footprint
- Big (little) Brother analogy
- Metadata
- RFID
- Bio-metric Data

# Ch 3 BTB

- Modeling vs. rendering
- OCR
- Compression
  - Lossy vs. lossless
- Which bits matter most? Left or right?
- Disk formatting
- Steganography - the practice of concealing messages or information within other nonsecret text or data.

# The Digital Age

- Transistors
- Integrated Circuits
- Photolithography
- The Internet
  - http
  - www

# Bits and Gates

- And, Or, Not
- Binary Addition
- Conversion
  - Binary to decimal
  - Decimal to binary
- ASCII chart
  - Know how to read

# Snap

- repeat block
- for loop
- if/else
- Operators
  - Arithmetic (+, -, ÷, x)
  - random
  - Logical operators (less than, greater than, equal)
  - Boolean (And, Or, Not)
- Variables
- Custom blocks