Crash Course Computer Science #2: Electronic Computing

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| Name: |  | Date: |  |

# Instructions

Watch *Crash Course Computer Science #2: Electronic Computing* on YouTube first. Then answer the following questions. Try to answer the question without looking at the video, but re-watch the video or parts of it if you cannot remember the answer.

1. Computers started out as electro-mechanical devices; what was one of the largest ones ever built in 1944?:
2. Yale Mark 3
3. Princeton Mark IV
4. Harvard Mark I
5. Luther Mark VI
6. Fill in the blank: A relay is an electrical component that acts like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ does for controlling the flow of water.
7. Why is building a computer out of mechanical relays not a great way to build a computer? Circle all that apply:
   1. Mechanical relays have mass
   2. Mechanical relays make clicking noises
   3. Mechanical relays wear out quickly
8. On the Harvard Mark I mechanical computer, how long would it take to do a division problem?
   1. 3 seconds
   2. 6 seconds
   3. 15 seconds
   4. 1 minute
9. What was the very first “computer bug” found by Grace Hopper?
   1. A programming error
   2. A cricket
   3. A rock
   4. A moth
10. *Fill in the blank:* In 1904, Flemming developed the very first glass vacuum tube, which was a one-way electrical component called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. What is the biggest advantage to vacuum tubes as electronic relays instead of using mechanical relays? Pick the best answer:
    1. They are cheaper
    2. They are prettier colors
    3. They do not have moving parts
    4. They are easier to plug in.
12. *Circle One:* The first all-vacuum tube, programmable computer was the Colossus Mark I, which had 1,600 vacuum tubes inside. How was it programmed?
    1. Punch cards
    2. Java programming
    3. Plugging wires into plugboards
    4. Switching switches on and off
13. *Circle One:* ENIAC was the first general purpose, programmable electronic computer. What does ENIAC stand for?
    1. Electronic Numerical Integrator And Calculator
    2. Electronic Numerator Instigator And Computer
    3. Electronic Number Inferior And Consolidator
    4. Easy Number Inverter And Cruncher
14. *Fill in the Blank:* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the invention that came after the vacuum tube, composed entirely of solid material, but using the same principle to turn electrical current on and off depending on a control wire’s voltage.