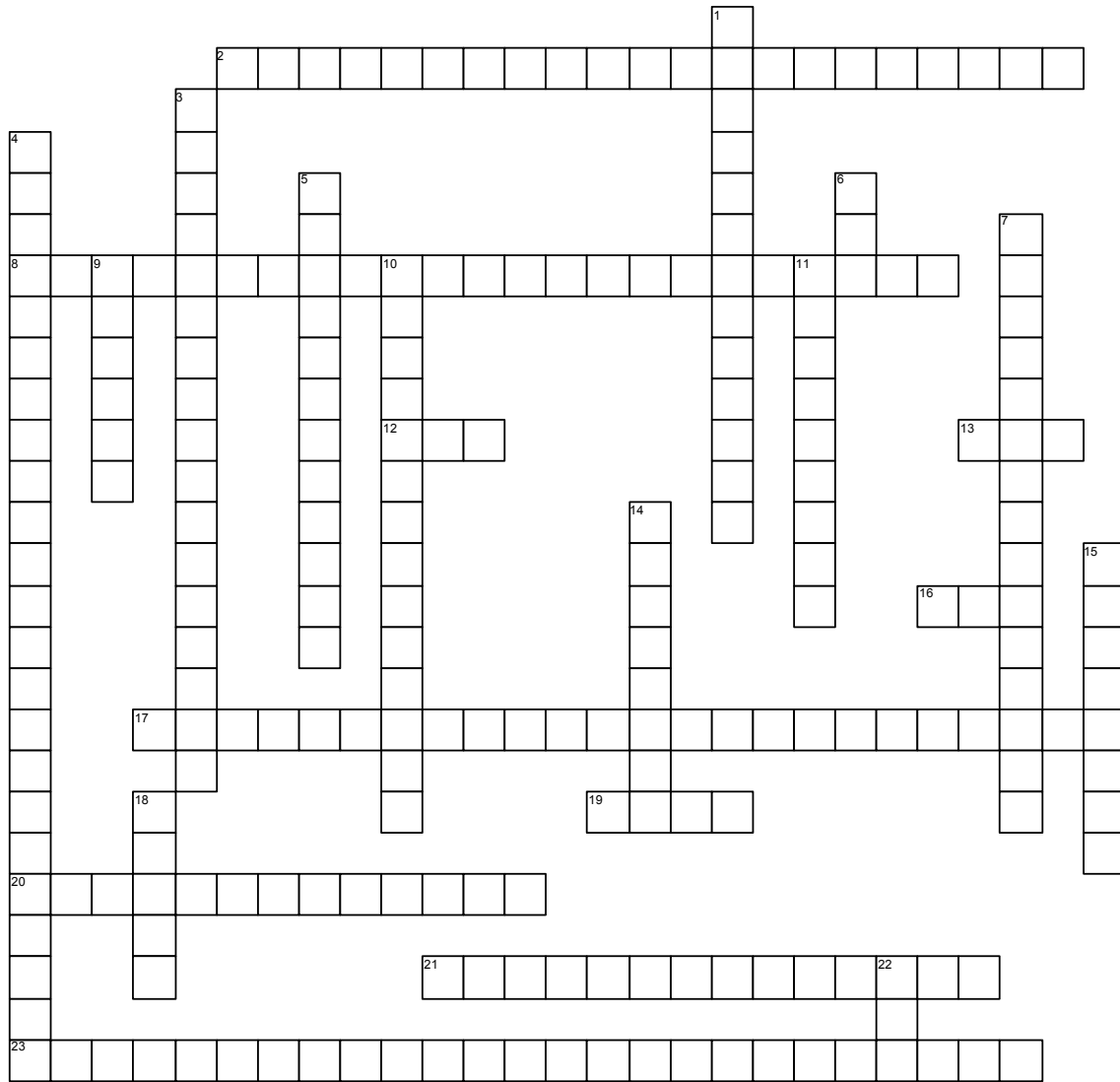


# Computer Fundamentals

## Chapter 13



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### ACROSS

- 2 One of the names for the onboard automotive computer is the \_\_\_\_\_.
- 8 One of the names for the onboard automotive computer is the \_\_\_\_\_.
- 12 A type of volatile RAM called \_\_\_\_\_ can be wired directly to battery power.
- 13 Temporary memory is called \_\_\_\_\_.
- 16 \_\_\_\_\_ is a method of controlling an output using a digital signal.
- 17 A digital computer changes the analog input signals to digital bits of information through an \_\_\_\_\_ circuit.
- 19 Part of the ROM is built into the computer, and the rest is located in an IC chip called a \_\_\_\_\_.
- 20 The PCM switches are actually transistors, and are often called \_\_\_\_\_.

- 21 \_\_\_\_\_ can retain its information even when the battery is disconnected.
- 23 One of the names for the onboard automotive computer is the \_\_\_\_\_.

### DOWN

- 1 \_\_\_\_\_ creates a three-dimensional performance graph that applies to a given vehicle and powertrain combination.
- 3 \_\_\_\_\_ is a process that includes amplifying voltage signals that are too small for the computer circuitry to handle.
- 4 The SAE bulletin J1930 standardizes the \_\_\_\_\_ as the name of the onboard automotive computer.
- 5 The number system containing only 0s and 1s is called the \_\_\_\_\_.
- 6 The \_\_\_\_\_ can be considered the brain of a

computer.

- 7 The \_\_\_\_\_ can process thousands of digital signals per second because its circuits are able to switch voltage signals on and off in billionths of a second.
- 9 Most program chips since the early 1990s, called \_\_\_\_\_ can be reflashd.
- 10 \_\_\_\_\_ is another name for a crystal oscillator.
- 11 The ratio of on-time relative to the period of the cycle is referred to as \_\_\_\_\_.
- 14 An \_\_\_\_\_ is an electrical or mechanical device that converts electrical energy into heat, light, or motion.
- 15 The computer's speed is called the \_\_\_\_\_.
- 18 \_\_\_\_\_ is a signal from a device that can be as simple as a button or a switch on an instrument panel, or a sensor on an engine.
- 22 Permanent memory is called \_\_\_\_\_.