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### ACROSS

- 2 Leverage creates a \_\_\_\_\_ that, at the brake pedal, is called the pedal ratio.
- 4 Inertia, in the form of \_\_\_\_\_, plays a major part in a vehicle's braking performance.
- 6 The \_\_\_\_\_ in brake systems are used to increase force, so they are either first- or second-class.
- 8 One measurement of the coefficient of friction is the \_\_\_\_\_ coefficient.
- 10 Most vehicles have a forward \_\_\_\_\_, which means that even when stopped, more than 50% of their weight is supported by the front wheels.
- 11 \_\_\_\_\_ is a fundamental form of mechanical energy.
- 15 The amount of friction between two objects or surfaces is commonly expressed as a value called the \_\_\_\_\_.

### DOWN

- 1 One measurement of the coefficient of friction is the \_\_\_\_\_ coefficient.
- 3 The primary mechanical principle used to increase application force in every brake system is \_\_\_\_\_.
- 5 \_\_\_\_\_ is the ability to do work.
- 7 A \_\_\_\_\_ of 5 to 1 is common for manual brakes, which means that a force of 10 lb at the brake pedal will result in a force of 50 lb at the pedal pushrod.
- 9 \_\_\_\_\_ is the resistance to movement between two surfaces in contact with one another.
- 12 \_\_\_\_\_ is defined by Isaac Newton's first law of motion, which states that a body at rest tends to remain at rest, and a body in motion tends to remain in motion in a straight line unless acted upon by an outside force.
- 13 In the science of mechanics, a lever is a simple machine that consists of a rigid object, typically a metal bar that pivots about a fixed point called a \_\_\_\_\_.
- 14 \_\_\_\_\_ is the transfer of energy from one physical system to another, especially the transfer of energy to an object through the application of force.