

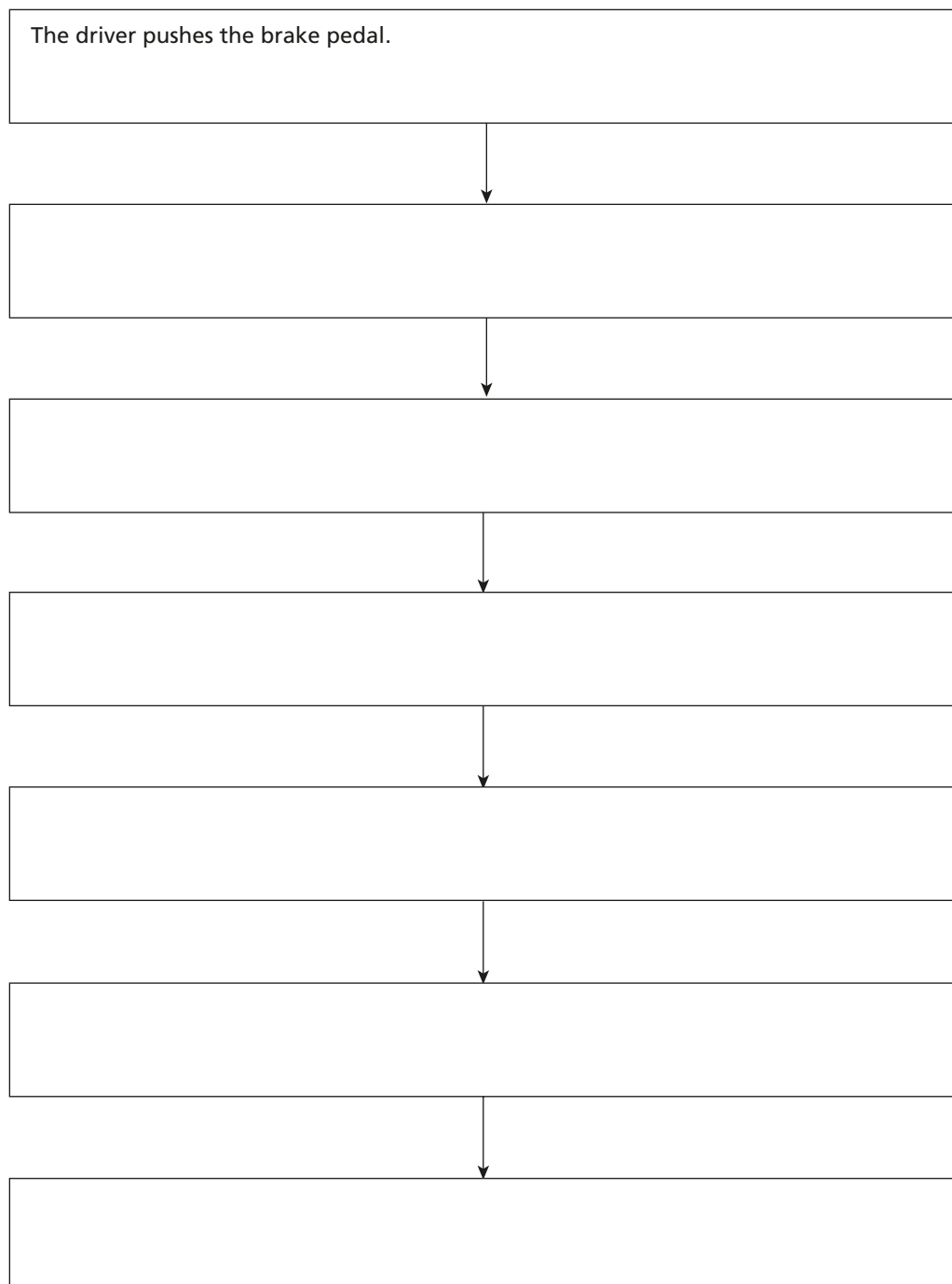
**Forces in Fluids** ▪ *Reading/Notetaking Guide*

# **Pascal's Principle** (pp. 432–436)

*This section explains what Pascal's principle says about change in fluid pressure and describes how a hydraulic device works.*

## **Use Target Reading Skills**

*As you read about hydraulic systems, complete the graphic organizer to show the sequence of events that happens when a person applies the brakes to slow a moving car.*



**Forces in Fluids** ▪ *Reading/Notetaking Guide*

**Transmitting Pressure in a Fluid** (pp. 433–434)

1. What happens to the pressure in a bottle of water if you press the stopper at the top down farther?

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2. What is the relationship known as Pascal's principle?

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**Hydraulic Systems** (pp. 435–436)

3. Suppose you push down on a small piston that is connected to a confined fluid, and another piston with the same area is connected by a U-shaped tube to the confined fluid. How much force will the second piston experience compared to the first?

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4. Suppose you push down on a small piston that is connected to a confined fluid, and a piston twenty times larger is connected by a U-shaped tube to the confined fluid. How much force will the larger piston experience compared to the small piston?

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5. In a hydraulic system, how is the force applied on a small surface area multiplied?

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6. Is the following sentence true or false? A car's brake system multiplies the force of the driver's tap on the brake pedal.

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