Automotive Brake Systems, 7th Edition Chapter 17	
Name	
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.	
1) When is it possible for a vehicle to stop in a shorter distance without ABS than with ABS?	
2) How does an active wheel speed sensor work?	
3) How does an antilock braking system (ABS) work?	
4) What is the difference between a three- and a four-channel system?	
5) What are the three stages of ABS operation?	

Answer Key

Testname: BRAKES7_SHORT17

1) The shortest stops is when braking on loose gravel or dirt, or in deep, fluffy snow. Under these conditions, a locked wheel will stop the vehicle faster because loose debris builds up and forms a wedge in front of the tire that helps stop the vehicle.

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- 2) An active WSS is also called a digital wheel speed sensor because it generates a digital on and off output signal and is capable of detecting wheel speed as low as 0 mph (0 km/h).

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- 3) An antilock braking system works by controlling brake fluid pressure to prevent wheel lockup during braking. Page Ref: 311
- 4) A three-channel antilock braking system controls each front wheel as a separate channel, but controls both rear wheels together as a single channel. Four-channel ABS controls all four-wheel brakes individually.

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- 5) The three stages of ABS operation include:
 - a. Pressure increase
 - b. Pressure hold
 - c. Pressure reduction

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