

**Brad's Last Ride<sup>1</sup>****Answer Key**Instructions

Compare your answers to those in this answer key.

Discuss the answers and any differences of opinions with your friends and the instructor.

Your ideas can help improve this exercise. Therefore, please don't mark additional answers or change the answers on your answer sheet. Your answers, and the answers of many other people, will be studied and used to improve the exercise.

Question A

- T        1. The boys and their dads had planned the ATV riding adventure for the last 6 weeks. Having to cancel the outing was very disappointing.
- T        2. Both think they are skilled riders and not at risk for a crash or injury.
- T        3. When they and their dads use ATVs for farm chores, they never wear their helmets, but they do wear them during recreational rides. (Note: ATV safety courses and manufactures stress that approved helmets should be worn every time a person operates an ATV. Visit the ATV Safety Institute web site listed on page 16 of the problem booklet and watch the online video titled, *Ride Safe, Ride Smart.* )
- T        4. The boys know that their moms and dads would not approve of their speeding and reckless operation of the ATVs, but they don't think their parents will find out about it.
- T        5. Sometimes in the past the two friends raced their ATVs on their farms and neighboring land when they were out of the sight and hearing of their parents, and sometimes they didn't wear their helmets.
- T        6. Both boys underestimate the risk of riding fast over rough ground without wearing a helmet and also overestimate their riding skills.
- F        7. The boys love and respect their dads who they work with and learn from every day while doing farm chores.

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<sup>1</sup> This answer key should be used with the exercise problem booklet with the same name. The views expressed in this document are those of the authors and not necessarily those of CDC/NIOSH or the US Government.

Question B

- T 8. At high speeds, hitting a hole, log, stump, or rock hidden in a clump of weeds could easily upset an ATV and throw and injure the rider.
- T 9. If a hole, rock, log, or stump was spotted at the last second and the rider attempted a sharp turn at high speed, the ATV could overturn.
- T 10. Speeding up a steep bank or hill moves the ATV center of gravity to the rear and makes it much easier for the ATV to flip over backward if anything snags a rear wheel. A serious injury may result.
- T 11. Making a high speed turn while descending a steep hill or stream bank increases the risk of losing control, running into something, or flipping.
- T 12. One trick in racing ATVs is for the person behind to take a shortcut on a turn and cut the lead rider off to gain the lead position. This dangerous move can result in high speed crashes and severe injuries to both riders.
- T 13. It is possible, and even likely, that no mishaps will occur during the boys fast and wild ride. But this type of riding, especially without wearing helmets, places riders at high risk for injury.
- F 14. The boys' legs are protected by the ATV fenders that prevent entanglement.

Question C

- F 15. Zack can yell and point, but Brad may not hear him or understand the warning. Even if Brad picks up on Zack's warning, he will probably hit the fence. At 35 mph his ATV is traveling at 51.3 feet/second. If it takes him only a half second to understand Zack's warning, face forward, and see the fence, Brad will have traveled 25.6 feet. In less than the remaining half second and 24 feet he will not have time to react, brake and slow down, or to steer around the fence. If he attempts a panic turn at that speed, he will roll the ATV and will likely hit the fence anyway.
- F 16. Zack won't have time to accelerate and pass Brad on the left in less than one second. Even if he does so, by being on the left he will block Brad's only possible escape route. As a result Zack and his ATV also may be involved in the crash.
- F 17. At 35 mph in the half second remaining, and less than 25 feet to the fence, Brad will not have enough time to react to the situation and steer around the fence. If he starts to do so, he will likely hit the left end of the fence or roll his ATV or both.
- F 18. Things are happening too fast! He doesn't have time to react and jump. Even if he could jump, the momentum of his body traveling at 51.3 feet/second will carry his body forward and into the fence.
- T 19. For the reasons described above, at this time there is nothing that either Zack or

Brad can do that will keep Brad from crashing into the fence.

Question D

- T 20. Bringing and wearing their helmets while riding in the pasture would have prevented Brad's severe brain injury.
- T 21. They would have been wise to return to the house and get their helmets before deciding to race around the pasture.
- T 22. If their parents had stressed and required that the boys wear their helmets when they were riding ATVs, and especially if their dads always wore their helmets when riding ATVs, the boys probably would have developed the habit of wearing their helmets when riding.
- T 23. If the parents had required the boys to take an ATV safety course, Zack and Brad may have learned more about the injury risks and consequences of riding and racing ATVs while *not* wearing a helmet. As a result, they might have been more likely to wear their helmets. (Visit the web sites listed on page 16 to locate and enroll in an ATV safety course.)
- F 24. An ATV requires the rider to stand on the footrests with knees bent and to lean forward when climbing hills, backward when descending hills, and to the inside when cornering. This is called "active" (versus passive) riding. A seat belt would restrict the rider and lead to loss of control.

Question E

- F 25. His arms are too weak to do this in his hand-operated wheel chair. He might be able to do it in a battery powered wheelchair, if he can remember what he is supposed to do, how to drive the wheelchair, and then come back to the house.
- F 26. He doesn't have the upper body strength, speed, stamina or mental concentration and memory to participate in this or other similar sports.
- T 27. He can interact with Zack and other school friends but in limited ways. His memory and speech limitations make it difficult for him to know who he is with and what is happening. Yet, such interactions are helpful and important to his well being and over time may improve his mental state and functioning.
- F 28. His motor skill difficulties as well as his memory problems make it impossible for him to operate an ATV.
- F 29. The boys' ATVs are designed for one rider. This fact and Brad's disabilities make it impossible for him to ride safely on the back of Zack's ATV.
- T 30. He can still see and watch television and listen to music. He may enjoy and benefit from both but not remember what he is seeing and hearing.
- T 31. Brad can do this with help from his dad, Zack, and others. He may enjoy and benefit from such outings, but it will be much more difficult for him and for those

who travel with and assist him.

- F 32. He may be able to return to school but will likely need to be enrolled in a special education program. He may benefit from such a program but it is unlikely he will be able to complete regular classes and graduate from high school with an academic diploma.
- F 33. He can still participate in outings and social activities, but his physical and mental limitations severely restrict his social interactions, probably for the rest of his life. He may enjoy and benefit from interacting with young women but it is unlikely that he will be able to date in the usual sense. Dating involves building relationships that require memories of persons, places, events, and feelings. If Brad fails to recognize or remember his own family members and friends it will be difficult for him to establish new personal relationships with others including young women whom he may meet.