**Sumobot Challenge Pre-Quiz Answer Key**

1. **What must you keep in mind when building a robot to fight another robot by trying to push it out of a ring?**

**Example possible answers:**

* **Robot structure, that is, to scoop the other robot, pushing mechanism, etc.**
* **Robot weight**
* **Robot gear ratio: power vs. speed**

**2. How can you use gears to your advantage in the competition?**

**Example possible answers:**

* **Use a low gear ratio (small gear turning a big gear) and focus on a powerful attack.**
* **Use a high gear ratio (large gear turning a small gear) and focus on a speedy attack.**
* **Use a medium gear ratio and balance between both power and speed.**