

Pre-Activity Quiz **Answer Key**

1. What are some challenges that must be considered in designing software that enables a car to drive itself?

Example answers: Cars must be able to “see” street signs, avoid other cars, not hit pedestrians, etc.

2. Can these challenges be solved by a computer programmer? How do you know that you have accounted for every possible scenario your car might face?

Computer programmers can account for most scenarios and they can do extensive testing, but you do not know that every possibility has been tested. This is the crux of the testing we will be doing in our program. We can test for most scenarios, but then we hope our algorithms will work on the majority of untested cases that exist “in the wild.”

3. If we do not know that our car will work in every situation, how do we begin to trust it “in the wild”?

Through extensive testing, we can have a fair confidence in our designs. Humans are not perfect drivers so if we can reduce the frequency of accidents, is that a success? (This is a fantastic opportunity for discussion or short essay answer.)