

VEX Robotics Changing Velocity

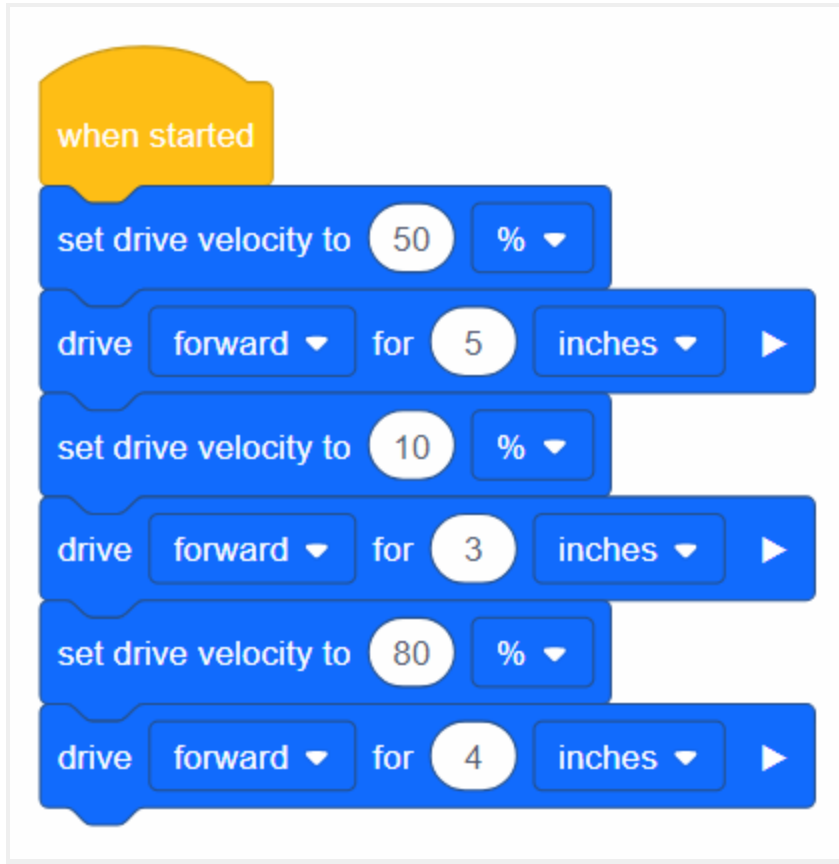
1. Why does the Autopilot have four wheels instead of only two? Why is having four wheels better?

2. VEX IQ calls their motors Smart Motors. Why do you think they call them smart? What might VEX IQ Smart Motors do that would make them seem smart?

3. Should the Autopilot always drive as fast as it can? Why or why not? Give at least one example of when it should drive its fastest and at least one example of when it should drive more slowly.

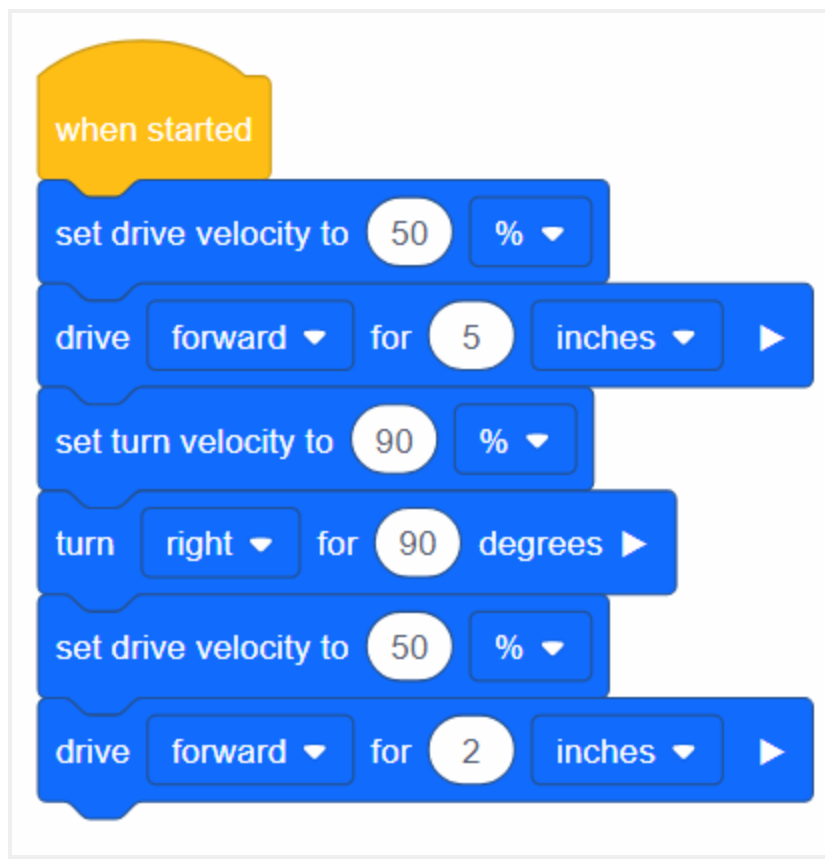
4. True or False: You can program your robot to move without using a block that sets velocity.

5. In this example project, how far does the robot move at 10% velocity?



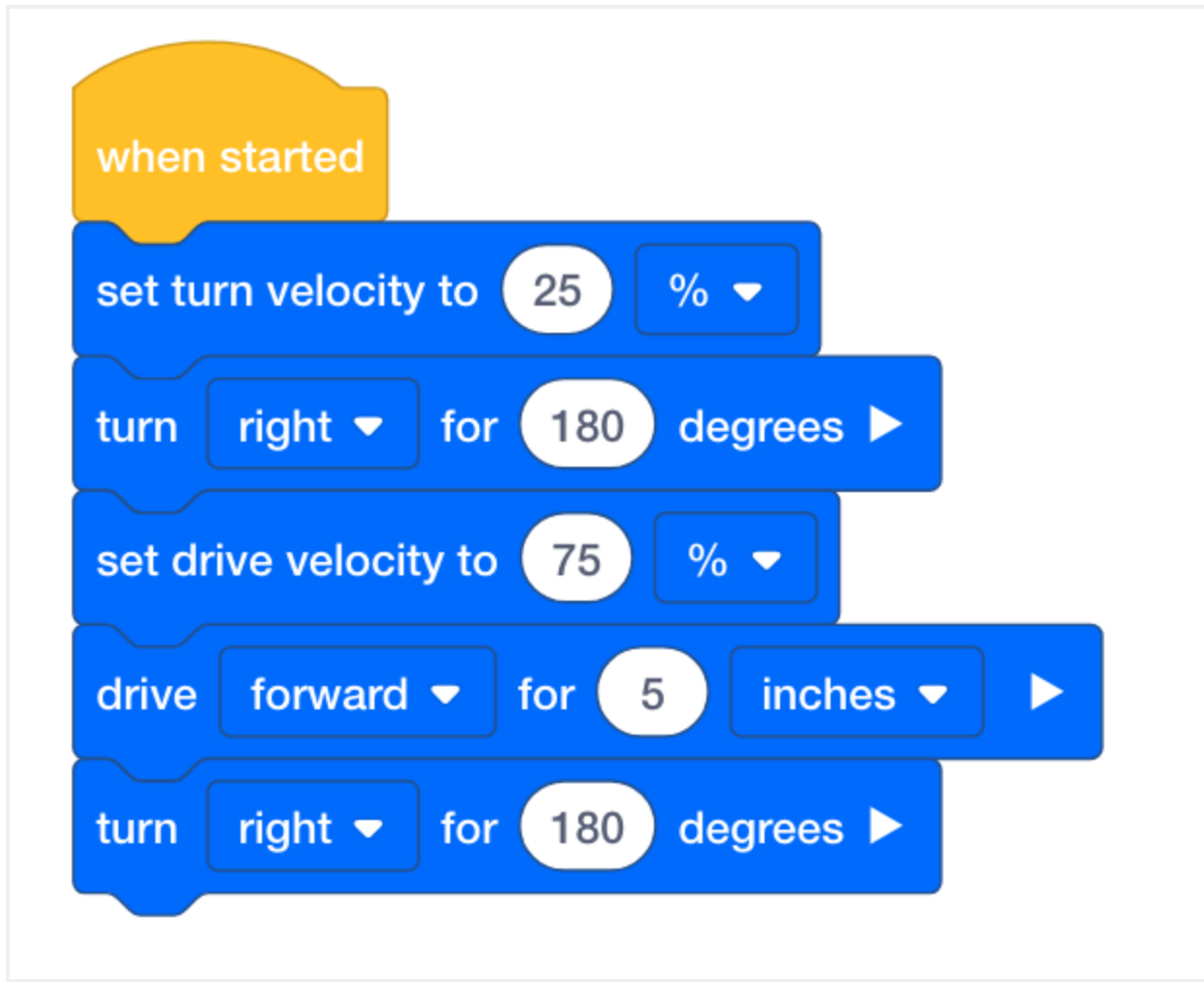
- 12 inches
- 5 inches
- 3 inches
- 4 inches

6. Bobby wrote the example project below. He noticed that when he runs the project, the robot starts to move out of control when it begins to turn. What should Bobby do in order to have his robot make more controlled movements when it begins to turn?



- Decrease the **set turn velocity**
- Decrease the **set drive velocity**
- Change the direction of the turn from right to left
- Increase the **set drive velocity**

7. Which of the following **best** describes how the robot will behave based on the project below?



- The robot will drive forward for 5 inches at 25% velocity, then turn around at 25% velocity.
- The robot will turn around at 25% velocity, drive forward for 5 inches at 75% velocity, then turn around again at 25% velocity.
- The robot will turn around at 75% velocity, drive forward for 5 inches at 25% velocity, then turn around again at 75% velocity.
- The robot will spin in a circle at 25% velocity.