If you're struggling getting your Romi to run, here are some general things to try or check. These cover a wide range of problems and you can try any or all of them depending on your particular situation.

- Make sure you have a positive connection with your Romi. An easy way to do this is to open the robot simulation application and see if the values in the RomiGyro window change if you physically move the Romi (they'll usually change even if you're *not* moving the Romi since the gyro is very sensitive, but it's easiest to just move the Romi to make sure.) The RomiGyro window can be found in the "Other Devices" window on the right side of the application (it may be minimized by default, but you can click the arrow to expand it.) If the values are changing, you're connected, but if they are not, you're not connected to your Romi.
- If you're connecting to the Romi wirelessly, and the computer you're using is set up to automatically connect to a different wifi network (such as your home or school internet wifi), it's possible that you suffered a brief connection loss with your Romi and during this time, your computer automatically connected to a different network. Check which network you're connected to and ensure it's your Romi's network.
- If you're using the Romi in a classroom or team environment and there are other Romis in use, confirm that they have unique network names and that you're connected to the right one. You could be connected to someone else's Romi.
- If you're unable to connect to the Romi's wifi, you can try plugging it into your computer with an ethernet cable and connecting to it locally and re-configuring the network. Refer to lesson 1 and the WPILib documentation for more details on this.
- Try clicking the red square in VSCode to stop your program and re-deploying your code.
- Sometimes the connection between VSCode and the Romi can fail. Restarting VSCode and/or the Romi may solve this.
- Make sure that your joysticks are plugged in to your computer, and that you've dragged your joysticks from the System Joysticks window, over to the Joysticks window, in the correct slots. The robot simulation app seems to have a very poor memory when it comes to joysticks, and so you may need to re-assign joysticks on every run of your program.
- It's possible that, especially if you're running a program for the first time, that you don't have the axes/buttons in your robot code hooked up to the axes/buttons you're trying to control the Romi with. Refer to lesson 1 if you forget how to check and assign axes in the RomiReference project.
- Try running your robot in autonomous mode if your program has an autonomous mode. Autonomous modes will typically work regardless of your joystick setup.
- If all of these tests fail, try creating a brand new RomiReference project and deploying it. You can then run the autonomous mode (be careful because this should cause the robot to move.) If you can confirm that you're connected to the Romi but this program does not cause the Romi to move, you may have a physical issue with the Romi. This is most likely either if you're just unboxing the Romi for the first time and it's *never* been able to move, or if something happened to it (like being dropped.) If it does run, then you may have an issue with the code in your program that you don't realize.
- It's possible that your joystick is not working properly. You can drag a joystick from the System Joysticks window to the Joysticks window and then start pressing on the axes/buttons on that joystick and see if the values shown in the Joysticks window change or not. If they do not

change, then there is a problem with the joystick. If the joystick does not appear in the Systems Joysticks window at all, then your computer is not registering the joystick and you might have either a physical problem with the joystick or a connection issue (loose USB connection, bad USB port on your computer, bad wireless connection if using a wireless joystick, etc.)