# Module 1: Answers

1. What types of computing cores are available on the Jetson TK1?

**There are 4 ARM A15 cores, 1 low power ARM core, and 192 CUDA cores on the GPU.**

1. How can you remotely connect to the Jetson TK1?

* **Command line: using ssh**
* **Graphical: using a vnc client**

1. Describe the reasons for having the Arduino Mega run alongside the TK1.

**The Arduino Mega handles low-level embedded functionality such as reading sensors and controlling the motors.**

1. What components are directly connected to the battery?

**The Jetson TK1 and the H-bridge shield.**

1. Describe the capabilities of ROS nodes.

**ROS nodes are processes that perform some computation. They can be reading a sensor and publishing the sensor value. They can also be used to send commands to the motors.**

1. What does it mean for ROS Topics to be 'strongly typed.'

**Topics can only send messages that are only of the correct type for that topic.**

1. What command is used to clean out any recently compiled ROS nodes?

**catkin\_make clean**

1. Describe the relationship between the Ubuntu Linux OS and ROS.

**Linux is the actual running OS kernel. ROS is a framework that runs on top of Linux and provides messaging between ROS processes.**

1. How are ROS nodes started?

**The can be started using the roslaunch command.**

1. How can you know what topics are available on a ROS system?

**rostopic list**