- (True/False) A learning curve as a person becomes more comfortable with software should hypothetically become a vertical asymptote?
- (True/False) Android applications use a method called Activity to start the application process?
- (True/False) Android can natively (factory install) connect to adhoc networks.
- (True/False) Android needs to specify permissions about using features, such as the internet, to have some applications work correctly?
- (True/False) Risk Mitigation is about not having to know what to do when a task in the project goes wrong.
- (True/False) ROI stands for Return on Investment?
- (True/False) Serial communication is a one-way communication.
- Android is based on which kernel?
  - Linux kernel
  - Windows kernel
  - MAC kernel
  - Hybrid kernel
- Android is based on which language?
  - C
  - C++
  - VC++
  - Java
- At what frequencies do Wi-Fi radios make transmissions?
- Bonus question! What is your favorite item about this class so far?
- Define each of the following acronyms/abbreviations in the context of this course: ISR, USART, 9600/8N1, PWM, ADC, DAC, RISC, POR, WDT, DSSS, OFDM.
- Describe a situation where polling is more appropriate than using an interrupt handler.
- Describe a situation where polling is more appropriate than using an interrupt handler.
- Describe a situation where using an interrupt handler is more appropriate than polling.
- Describe a situation where using an interrupt handler is more appropriate than polling.
- Discuss three (3) different design decisions that must be made for the construction of the robot (physical assembly).
- What replaces EasyC for the Vex in the Open Source World?
- Elaborate on one pro and one con of "rooting" an Android phone.
- Explain the advantages and disadvantages of using the Kinect sensor in your robot design.
- Explain the difference between an ad hoc network and an infrastructure.
- For every dimension of space, how many uniquely located satellites are needed to locate a point?
- For GPS, a two-dimension space (1D being time and the other dimension being space) requires how many satellites? What about 4D?
- For the C level of the project, what percent grade did the Vex robot need to climb?
- Give a broad explanation of 802.11.
- Give a broad explanation of the communication system between the Android and the Vex.
- Give three different inputs on the Vex hardware platform?
- How does one instruct a C compiler not to optimize away global variables?

- How does one instruct a C compiler not to optimize away global variables?
- How many WiFi G Channels are available in the US?
- If an Android application wants to use the Internet for any reason, what permission must you give it?
- If an embedded device could be perfectly designed and placed into an application, what would some of its characteristics be?
- In regards to risk analysis for this class's project, what is the reward/value, and what is the cost?
- List and describe three different operational modes for IEEE 802.11 wireless cards.
- List and describe three different operational modes for IEEE 802.11 wireless cards.
- List at least three different communication protocols, wired or not, that are suggested to be used for the final project.
- List five different interrupt sources on PIC18F8520 microprocessor (the brain of the Vex Controller).
- List five different interrupt sources on PIC18F8520 microprocessor (the brain of the Vex Controller).
- OpenVex is based in what language
- Referring to your answer to the previous question, identify which of these sources (if any) are handled by the default code provided by OpenVex.
- Referring to your answer to the previous question, identify which of these sources (if any) are handled by the default code provided by OpenVex.
- The Android platform is development using what programming language?
- The Knock Knock application provided in class provided communication between what two devices?
- The two channels used for WiFi in the US are approximately 2.4Ghz and 5Ghz.  What are the restrictions that force the use of these frequencies?
- The US Department of Defense originally used how many satellites for GPS?
- True or False: An Android activity can run in the background.
- True or False: Only one virtual machine can run on an Android system at a time.
- True or False: Since Android is based on linux, one of the security features built in is that each application runs as a separate user.
- Turnip who?
- Turnip who?
- What are other options besides traditional debugging where embedded code can be verified?
- What are other ways that a GPS is able to increase accuracy other than using more satellites?
- What are some hazards when running an embedded device for an undefined amount of time that aren't quite as important when developing a small desktop application?
- What are the 4 application components for Android?
- What are the factors that go into calculating a risk analysis?
- What can be done to make a gps coordinate from satellites more accurate?
- What frequency/frequencies does Wifi operate at?
- What has the biggest challenges been for you (and your team) so far and what could you have done to mitigate it?
- What is Ad-Hoc Mode in Wireless Networking?
- What is an atomic operation? Give an example.

- What is an atomic operation? Give an example.
- What is CyanogenMod and why would you use it?
- What is one additional feature not previously discussed in class that could be implemented using the provided hardware for your robot?  How would you design it?
- What is the correct Linux bash command to change access permissions?
- What is the correct Linux bash command to change directories?
- What is the correct Linux bash command to change file owner and group?
- What is the correct Linux bash command to copy one or more files to another location?
- What is the correct Linux bash command to make a new folder?
- What is the correct Linux bash command to print working directory?
- What is the correct Linux bash command to remove files?
- What is the correct Linux bash command to remove folders?
- What is the correct Linux bash command to set an environment variable?
- What is the correct Linux bash command to test a network connection?
- What is the debugging tool called that Google created for Android?
- What is the difference between Xubuntu and Ubuntu?
- What is the equation for return on investment (ROI) in regards to gain, cost, and risk?
- What is the minimum number of gps satellites to get a gps coordinate?
- What is the name of the Java virtual machine that Android uses?
- What is the name of the open source tool to program for the vex?
- What is the simplest way to ensure an operation completes atomically?
- What is the simplest way to ensure an operation completes atomically?
- What language are Android user interfaces written in?
- What program is necessary to unlock an Android phone?
- What standard Wifi channels are forbidden in the United States?
- When Android files are compiled, you're given a *.dex file.  What does this extension stand for?
- When using a terminal emulator, the characters you type appear locally because the remote device echoes back your keyboard input. Write the (pseudo) code for an ISR that could run on the Vex Controller to echo back each character you type.
- When using a terminal emulator, the characters you type appear locally because the remote device echoes back your keyboard input. Write the (pseudo) code for an ISR that could run on the Vex Controller to echo back each character you type.
- Why do you need another device to handle GPS on the robot when XP is not installed on the netbook?
- With a rooted Android phone, what does the command "su" stand for when granting elevated privileges?
- Write pseudo code for an autonomous robot with collision detection.