

## Computational Thinking Component Challenge (100 xp)

Name \_\_\_\_\_

1. Go to alienware.com, dell.com, bestbuy.com, or any other site that sells computers. Pick a computer and note its processor speed, RAM, hard drive size, and cost. Then go to newegg.com and find the components that are the rough equivalent of the machine you chose on the first site and find out how much it would cost for those components. Compare the two methods of buying a computer. Which is more expensive? Why do you think this is the case?

2. Choose one of the following scenarios (check the one you use) and use newegg.com to plan a computer that meets the scenario's requirements. List each component and its cost, making sure that the CPU and the memory are compatible with the motherboard.

\_\_\_ You are an 82-year old grandparent. Your computer will be used primarily to email your children and grandchildren. Budget: Build a computer for as little money as possible.

\_\_\_ You are a 32-year old successful business professional. You want a computer to play the latest video games, download movies, and keep up-to-date with the latest gadgets. Budget: Money is not an object.

\_\_\_ You are a working college student. You need a computer so you can write papers, write programming assignments, and maybe if you have some time, play a video game or two. You are looking for an all-purpose machine. Budget: \$1200

\_\_\_ You are a high school music teacher. You desire a new computer to start your own music studio so you can stop teaching and start your own recording career. You are interested in a computer with a high storage capacity and a state-of-the-art sound card. Budget: \$2200

\_\_\_ You are the wealthiest person in the world. Build the most ridiculously expensive machine possible. Budget: Money is not an object.

\_\_\_ You are an aspiring film director. You are buying a computer to store all of your home movies in hopes of compiling them into the next blockbuster feature-length film. Your machine needs to have a large amount of storage space. Budget: \$1600

\_\_\_ You work as a low-level employee for high-profile software company. You have been assigned to experiment with the next operating system that will require a large amount of RAM. Your company has given you \$1600 to invest in a machine that will exploit the current state-of-the-art RAM capabilities. Budget: \$1600

\_\_\_ You are a NASA scientist working from home. You need the fastest, most solid number-crunching machine you can buy for \$2000. Budget: \$2000

\_\_\_ You are a professional video game player. While not a lucrative career, your constant practicing while in college is finally paying off! You want the best game-playing machine available within a budget of \$2500. Budget: \$2500