Name: Class:

Task 1

1. The performance of a CPU is dictated and dependent on a number of factors. Complete the table below, stating how each of the factors mentioned affects the performance of a CPU.

|  |  |
| --- | --- |
| **Factor** | **How this affects performance** |
| Clock speed |  |
| Cache Size |  |
| Number of cores |  |

2. Two computers have different specifications.

Computer A has a quad core processor with a frequency of 2GHz.

Computer B has a dual core processor with a frequency of 4GHz.

(a) What is the maximum number of fetch-execute cycles that each processor could achieve?

(b) Explain why choosing processor B may be the better choice.

(c) Discuss how the use of cache can improve the performance of CPUs.

Task 2

1. Below are three devices that use embedded systems. Complete the table below the pictures and state how these devices use embedded systems

|  |  |
| --- | --- |
| C:\Users\Rob\Dropbox\PG Online\Artwork Stock Images\Shutterstock images\shutterstock_83924713 digital camera.jpg |  |
|  |  |
| C:\Users\Rob\AppData\Local\Microsoft\Windows\INetCache\Content.Word\shutterstock_436035733.jpg |  |

2. Research other embedded systems that are used today.

List as many as you can below.