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Winter 2020 Assignment 1

**COMP 228 Assignment 1 Solution**

**Question 1:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | B | Time |
| Serial | % | % | 100% |
| Parallel |  |  |  |
| Max () |  |  | 250 times |

Solve for x first, and then find p for 75% of 250 and then 90% of 250.

Find x:

1. How much processors do we need to speed up by 187.5 (75% of 250)?

processors

1. How much processors do we need to speed up by 225 (90% of 250)?

processors

EW

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | B | Time |
| Serial |  |  |  |
| Parallel |  |  |  |
| Max () |  |  | S seconds |

Find the value of s:

Find the value of x:

Find the value of y:

Solution:

**Question 2:**

We have:

and

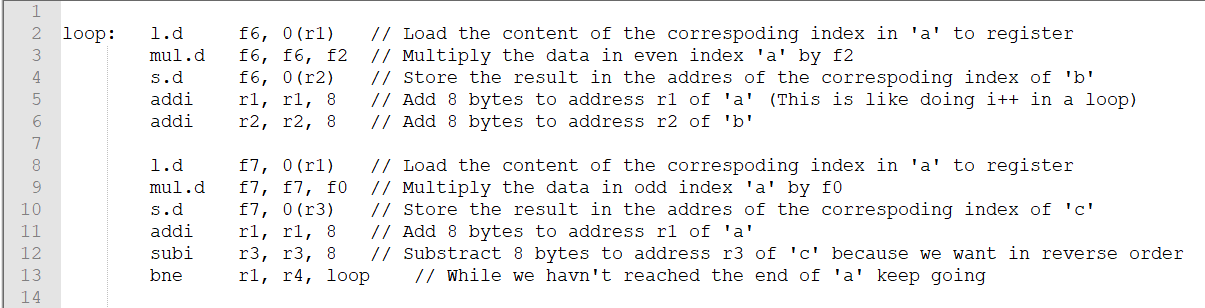
Find b:

Power usage:

SOLUTION:

1. We need beta and alpha
2. Total performance: and power dissipation

**Question 3:**

Consider f6 and f7 as registers. The Code will be:

**Question 4:**

A