(15 pts) Exercise 1-1: After assigned reading from Ch. 1, do Problems 1.1.1-1.1.26 from the text. Follow example of the first one given below.

1.1.1 **5, supercomputer**

1.1.2

1.1.3

1.1.4

1.1.5

1.1.6

1.1.7

1.1.8

1.1.9

1.1.10

1.1.11

1.1.12

1.1.13

1.1.14

1.1.15

1.1.16

1.1.17

1.1.18

1.1.19

1.1.20

1.1.21

1.1.22

1.1.23

1.1.24

1.1.25

1.1.26

(3 pts) Exercise 1-2

- **Do exercise 1.7.3 from the textbook.**

- **Final answers:**
  - **Clock rate ratio:**
  - **Power ratio:**
- **Notice the difference between the two!**

(blank)

(5 pts) Exercise 2-1

- **What is the MIPS assembly code for the following:**

  g = g + h - i;

  Variables g, h, & i are assigned registers $s1, $s2, and $s4

(5 pts) Exercise 2-2

- **What is the MIPS assembly code for the following:**

  g = h + A[3];

  Variables g, h, & i are assigned registers $s1, $s2, and $s4

  Array A base address is assigned register $s3

(5 pts) Exercise 2-3

- **What is the MIPS assembly code for the following:**

  g = h + A[i];

  Variables g, h, & i are assigned registers $s1, $s2, and $s4

  Array A base address is assigned register $s3

(extra space)

(10 pts) Exercise 2-4: Assume variables a, b, and c are assigned registers $s1, $s2, and $s3, and the address of array A is in $s6. Write the code for the following:

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b = A[1] - A[2];

(10 pts) Exercise 2-5: Assume variables a, b, and c are assigned registers $s1, $s2, and $s3, and the address of array A is in $s6. Write the code for the following:

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b = A[2 * c];