**Name:** Danica Marie A. Dumalagan

**Part I**

Sample calculation

**Diagram, schematic

Description automatically generated**

**Part II**

Using the formula to solve for PR2:

|  |  |  |
| --- | --- | --- |
| **Frequency (Hz)** | **PR2 in decimal** | **PR2 in hexadecimal** |
| 10 | 6249 | 1869 |
| 100 | 624 | 270 |
| 1000 | 62 | 3E |

Using the formula to solve for (CCPR1L:CCP1CON<5:4>)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Frequency (Hz)** | **Duty Cycle** | **CCPR1L:CCP1CON<5:4> in decimal** | **CCPR1L:CCP1CON<5:4> in binary** | **CCPR1L** | **CCP1CON<5:4>** |
| 10 | 10% | 2500 | 10 01110001 00 | 71 | 0x0 |
| 25% | 6250 | 110 00011010 10 | 1A | 0x2 |
| 50% | 12500 | 1100 00110101 00 | 35 | 0x0 |
| 75% | 18750 | 10010 01001111 10 | 4F | 0x2 |
| 95% | 23750 | 10111 00110001 10 | 31 | 0x2 |
| 100 | 10% | 250 | 00111110 10 | 3E | 0x2 |
| 25% | 625 | 10011100 01 | 9C | 0x1 |
| 50% | 1250 | 1 00111000 10 | 38 | 0x2 |
| 75% | 1875 | 1 11010100 11 | D4 | 0x3 |
| 95% | 2375 | 10 01010001 11 | 51 | 0x3 |
| 1000 | 10% | 25 | 00000110 01 | 6 | 0x1 |
| 25% | 63 | 00001111 11 | F | 0x3 |
| 50% | 125 | 00011111 01 | 1F | 0x1 |
| 75% | 188 | 00101111 00 | 2F | 0x0 |
| 95% | 238 | 00111011 10 | 3B | 0x2 |