In-Class Problem 1

Assume registers x18-x20 correlate to variables x, y, and z, and already have x = 5 and y = 6 loaded into the variables, compile the following C code to RISC-V Assembly and then to machine encoding.

```
z = x + y
```

Solution: `0000000 10011 10010 000 10100 0110011`

In-Class Problem 2

Assume all values are already included in the appropriate registers, compile the following RISC-V Assembly to machine encoding.

```
lw x5, 0x20(x18)
```

Solution: `000000010100 10010 010 00101 0000011`

In-Class Problem 3

Assume all values are already included in the appropriate registers, compile the following RISC-V Assembly to machine encoding.

```
sw x6, 24(x18)
```

Solution: `0000000 00110 10010 010 11000 0100011`

In-Class Problem 4

Assume all values are already included in the appropriate registers, compile the following RISC-V Assembly to machine encoding.

```
beq x7, x10, 24
```

Solution: `0|000000 01010 00111 000 1100|0 1100011`

In-Class Problem 5

Assume all values are already included in the appropriate registers, compile the following RISC-V Assembly to machine encoding.

```
lui   x5, 0x7fff0
```

Solution:

`01111111111111110000 00101 0100011`