RISC-V Problem 1 - Given the mapping of registers to variables below, write a program to implement the following expression:

```
int sum(int A, int B){
      return A + B;
}
int main(){
      int A=4, B=2;
      int z = sum(A, B);
      return 0;
}
```

Registers in main are A=x8, B=9, Z=x18

You are permitted to use labels in this problem

RISC-V Problem 2 - Given the mapping of registers to variables below, write a program to implement the following expression:

```
void swap(int* A, int* B){
	int temp = *A;
	*A = *B;
	*B = temp;
}

int main(){
	int A=10, B=7;
	swap(&A, &B);
	return 0;
}
```

Registers in main are A=x18, B=19
For simplicity, store A at 0x7fff1a10 for pass by reference
For simplicity, store B at 0x7fff1a18 for pass by reference

You are permitted to use labels in this problem

RISC-V Problem 3 - Given the mapping of registers to variables below, write a program to implement the following expression:

```
int array_sum(int* A, int length){

        int sum = 0;
        for(int i = 0; i < length; ++i){
                sum += A[i];
        }
        return sum;
}

int main(){
        int array[] = {13, 7, -8, 4};
        int array_len = 4;
        int result_sum = array_sum( array, array_len );
        return 0;
}
```

In main, array is in x18 and points to 0x7fff1a10, array_len is in x19, and result_sum is in x20.
In array_sum, sum is in x21 and i is in x22.