

Question 1 Code:

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  #include<math.h>
4  typedef struct imaginary{
5      int real;
6      int i;
7  } imaginary;
8
9  int main(){
10     imaginary num1;
11     imaginary num2;
12     printf("Enter real and imaginary values of number 1: ");
13     scanf("%d %d",&num1.real,&num1.i);
14     printf("Enter real and imaginary values of number 2: ");
15     scanf("%d %d",&num2.real,&num2.i);
16     printf("ADD = %d + %di\n",num1.real + num2.real,num1.i + num2.i);
17     printf("SUB = %d + %di\n",num1.real - num2.real,num1.i - num2.i);
18     printf("MUL = %d + %di\n",num1.real*num2.real - num1.i*num2.i,num1.i*num2.real + num2.i*num1.real);
19
20     return 0;
21 }
22
23
```

Question 1 Sample input and outputs:

```
zhong@JJ-Laptop /cygdrive/c/se185/jaden_burke_quiz08
$ ./q1
Enter real and imaginary values of number 1: 3 5
Enter real and imaginary values of number 2: 2 3
ADD = 5 + 8i
SUB = 1 + 2i
MUL = -9 + 19i

zhong@JJ-Laptop /cygdrive/c/se185/jaden_burke_quiz08
$ ./q1
Enter real and imaginary values of number 1: 5 2
Enter real and imaginary values of number 2: 6 8
ADD = 11 + 10i
SUB = -1 + -6i
MUL = 14 + 52i
```

Question 2 Code:

```

1  #include<stdio.h>
2  #include<stdlib.h>
3
4  /*add header file*/
5  typedef struct time {
6      int hr;
7      int min;
8      int sec;
9  } time;
10 /*declare functions*/
11 void convTime(int seconds, time *t);
12 void printTime(int seconds, time *t);
13
14 void main() {
15     time *mileTime;
16     /*allocate memory*/
17     mileTime = (time *)malloc(3*sizeof(int));
18     int seconds;
19     printf("Total seconds: ");
20     scanf("%d", &seconds);
21     convTime(seconds,mileTime);
22     printTime(seconds, mileTime);
23 }
24 void convTime(int seconds, time *t) {
25     t->hr = seconds/3600;
26     t->min = (seconds/60) % 60;
27     t->sec = seconds % 60;
28 }
29 void printTime(int seconds, time *t) {
30     printf("%d seconds = %d hr %d min %d sec\n",seconds,t->hr,t->min,t->sec);
31 }

```

Question 2 Sample input and outputs:

```

zhong@JJ-Laptop /cygdrive/c/se185/jaden_burke_quiz08
$ ./q2
Total seconds: 3665
3665 seconds = 1 hr 1 min 5 sec

zhong@JJ-Laptop /cygdrive/c/se185/jaden_burke_quiz08
$ ./q2
Total seconds: 2905
2905 seconds = 0 hr 48 min 25 sec

```