ENGG 1410 Assignment 2

Level 1

1. %
2. char (is a reserved word), 6_05 (starts with a number), A$ compiles but is a language extension. _1312 and _ compile but are reserved for the compiler.
3. Assuming we #include <stdio.h>

```
Testing .......1...2..3
```

4. (), ++, *, /, %, +, -, !=
5.

```c
// Missing #include <stdio.h>

int main(Void) // Should be: int main(void)
{
    INT sum; // Should be: int sum;
    /* Comput ReZult // Should be: /* Compt Result */
    sum = 25 + 37 -19 // Should be sum = 25 + 37 -1;

    /* Display Results // // Should be: /* Display Results */
    printf("The answer is %i\n"        sum); // Should be: printf("The answer is %i \n", sum);

    return 0;
}
```

6. AND -> &&, OR -> ||, NOT -> !

AND

A	B	R

A	B	R
0	0	0
0	1	0
1	0	0
1	1	1

OR

A	B	R
0	0	0
0	1	1
1	0	1
1	1	1

NOT

A	R
0	1
1	0

1. The result is 95
2. x = 4.5, n = 4
3.
   - a) it prints the ascii value of c4
   - b) it prints the ascii character of i
   - c) to do float division
   - d) because the values correspond to different ascii values.
4.
   - a) true
   - b) 17
   - c) 5.0

- d) 5.75

5.
- a) 2.5
- b) 10.0
- c) 11.2

2 Tracing

12. x = 1.5, y = 1

13.

```
i = 4
j = 9
k = 2 m = 9

i = 4
j = 9
k = 2 n = 10

i = 4
j = 9
k = 10

i = 4
j = 9
k = 10
```

14. it will print 15.0

3 Programming

15.

```c
#include <stdio.h>

int main(void) {
    printf("Enter an amount:");
    float val;
```

```
    scanf("%f", &val);
    printf("With tax added: $%.2f", val * 1.13);
    return 0;
}
```

16.

```
#include <stdio.h>

int main(void) {
    printf("Enter the number of seconds to evaluate: ");
    int seconds;
    scanf("%d", &seconds);
    int minutes = seconds / 60;
    seconds %= 60;
    int hours = minutes / 60;
    minute %= 60;
    printf("In 100 seconds there is %d Hours, %d Minutes and %d Seconds.", hours, minutes, seconds );
    return 0;
}
```

17.

```
#include <stdio.h>

int main(void) {
    printf("Enter a dollar amount: ");
    int dollars;
    scanf("%d", &dollars);
    printf("$20 bills: ", dollars / 20);
    dollars %= 20;
    printf("$10 bills: ", dollars / 10);
    dollars %= 10;
    printf("$5 bills: ", dollars / 5);
    dollars %= 5;
    printf("$1 bills: ", dollars);
```

```
    return 0;
}
```

18.

```
#include <stdio.h>

int main(void) {
    printf("Enter the first complex number in the form Re+jIM: ");
    int real1, real2, imag1, imag2;
    scanf("%d+j%d", &real1, &imag1);
    printf("Enter the second complex number in the form Re+jIM: ");
    scanf("%d+j%d", &real2, &imag2);
    printf("The result is: ", real1 + real2, imag1 + imag2);
    return 0;
}
```