

STAT 580 Homework 1

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```
1. #include <stdio.h>
#define lower 0
#define upper 200
#define rows 12

int main()
{
    double f, c, step;
    int i;

    f = lower;
    step = (upper - lower) / (double) (rows - 1);
    printf("F\tC\n");

    for (i = 1; i <= rows; i++)
    {
        c = 5.0 * (f - 32.0) / 9.0;
        printf("%.1f\t%.1f\n", f, c);
        f = f + step ;
    }
    return 0;
}
```

```
2. #include <stdio.h>

int main()
{
    char ch;

    ch = getchar();
    while (ch != EOF)
    {
        if (ch >= 48 && ch <= 57)
        {
            putchar(ch);
        }
        ch = getchar();
    }
    return 0;
}
```

3. `#include <stdio.h>`

```
int main()
{
    char ch;

    ch = getchar();
    while (ch != EOF)
    {
        if (ch >= 'a' && ch <= 'x')
        {
            putchar(ch + 2);
        } else {
            putchar(ch);
        }
        ch = getchar();
    }
    return 0;
}
```

4. `#include <stdio.h>`

```
int main()
{
    char ch1, ch2;
    int count = 0;

    ch1 = getchar();
    if (ch1 != EOF)
    {
        ch2 = ch1;
        ch2 = getchar();
        if (ch1 != '_' && ch1 != '\t' && ch1 != '\n')
            count++;
    } else {
        printf("\nNumber_of_words:_%d\n", count);
    }

    while (ch2 != EOF)
    {
        if ((ch1 == '_' || ch1 == '\t' || ch1 == '\n') && (ch2 != '_' &&
            ch2 != '\t' && ch2 != '\n'))
            count++;
        ch1 = ch2;
        ch2 = getchar();
    }
    printf("\nNumber_of_words:_%d\n", count);
    return 0;
}
```

5. (a) $\frac{3}{2} + 1$
 1 2
 value: 2
- (b) $\frac{1}{2} + \frac{3.0}{4.0}$
 1 2 1
 value: 0.75
- (c) $\frac{3}{2} < \frac{10}{3} \ \&\& \ \frac{2}{1} * \frac{8}{2} < 2$
 2 3 1 2
 value: 0
- (d) $x = 3 + 2$
 2 1
 value: 5
- (e) $j += i++$
 2 1
 value: 2
 value of i: 1