

1.)

Code:

```
#include <stdio.h>

int main()
{
    int digit1, digit2, reversed_num;

    //reads each digit and assigns them to appropriate variable
    printf("Enter a two digit number: ");
    scanf("%1d%1d", &digit1, &digit2);

    //places the 2nd digit in the tens place, effectively reversing the number
    reversed_num = (digit2 * 10) + digit1;

    printf("If you reverse the number %d%d you will get %d", digit1, digit2, reversed_num);
}
```

Output:

```
Enter a two digit number: 91
If you reverse the number 91 you will get 19
```

2.)

Code:

```
#include <stdio.h>

int main()
{
    int digit1, digit2, digit3, reversed_num;

    //reads each digit and assigns them to appropriate variable
    printf("Enter a three digit number: ");
    scanf("%1d%1d%1d", &digit1, &digit2, &digit3);

    //operations places third digit in the thousands place and second digit in the tens place
    reversed_num = (digit3 * 100) + (digit2 * 10) + digit1;

    printf("If you reverse the number %d%d%d you will get %d", digit1, digit2, digit3, reversed_num);
}
```

Output:

```
Enter a three digit number: 789
If you reverse the number 789 you will get 987
```

3.)

a.)

Code:

```
#include <stdio.h>

int main()
{
    int i, j, k;

    i = 3, j = 4, k = 5;

    printf("%d", i < j || ++j < k);
}
```

Output: 1

b.)

Code:

```
#include <stdio.h>

int main()
{
    int i, j, k;

    i = 7, j = 8, k = 9;

    printf("%d", i - 7 && j++ < k);
}
```

Output: 0

c.)

Code:

```
#include <stdio.h>
int main()
{
    int i, j, k;

    i = 7, j = 8, k = 9;

    printf("%d", (i = j) || (j == k));
    printf("%d %d %d", i, j, k);
}
```

Output: 18 8 9

d.)

Code:

```
#include <stdio.h>
int main()
{
    int i, j, k;

    i = j = k = 1;

    printf("%d", ++i || ++j && ++k);
    printf("%d %d %d", i, j, k);
}
```

Output: 12 1 1