과제 07 – 1

```c
#include <stdio.h>

void count_solution(int a, int b, int c) {
    int check;

    check = b*b - 4*a*c;

    if (check == 0) printf("Two same real values");
    else if (check > 0) printf("Two different real values");
    else printf("Two different real values");
}

int main(void) {
    int a, b, c;

    scanf("%d %d %d", &a, &b, &c);
    count_solution(a, b, c);

    return 0;
}
```

```
● → Tasks ./task7-1
  1 4 4
  Two same real values%
● → Tasks ./task7-1
  1 4 10
  Two different real values%
● → Tasks ./task7-1
  1 10 4
  Two different real values%
○ → Tasks
```

과제 07 – 2

```c
#include <stdio.h>

void check_prime(int num) {
    int is_prime = 1;
    if (num == 1) {
        is_prime = 0;
    }
    else {
        for (int i=2; i<num; i++) {
            if (num % i == 0) {
                is_prime = 0;
                break;
            }
        }
    }
    switch (is_prime) {
        case 0:
            printf("%d is not a prime number", num);
            break;
        case 1:
            printf("%d is a prime number", num);
            break;
    }

}

int main(void) {
    int num;

    scanf("%d", &num);
    check_prime(num);

    return 0;
}
```

```
● → Tasks ./task7-2
  1
  1 is not a prime number
● → Tasks ./task7-2
  2
  2 is a prime number
● → Tasks ./task7-2
  7
  7 is a prime number
● → Tasks ./task7-2
  17
  17 is a prime number
● → Tasks ./task7-2
  29
  29 is a prime number
● → Tasks ./task7-2
  30
  30 is not a prime number
○ → Tasks █
```

과제 07 – 3

```c
#include <stdio.h>

int count_prime(int num) {
    int result = 0;
    int is_prime;

    if (num == 1) result ++;
    for (int i=2; i<=num; i++) {
        is_prime = 1;
        for (int j=2; j<i; j++) {
            if (i % j == 0) {
                is_prime = 0;
                break;
            }
        }
        if (is_prime == 1) result++;
    }

    return result;
}

int main(void) {
    int num;

    scanf("%d", &num);
    printf("%d", count_prime(num));

    return 0;
}
```

```
● → Tasks ./task7-3
  1
  1█
● → Tasks ./task7-3
  3
  2█
● → Tasks ./task7-3
  5
  3█
● → Tasks ./task7-3
  6
  3█
○ → Tasks █
```

과제 07 – 4

```c
#include <stdio.h>

int fibo(int num) {
    int a = 0, b = 1, c = 1;

    if (num == 1) return a;
    if (num == 2) return b;

    for (int i=3; i<num; i++) {
        a = b;
        b = c;
        c = a + b;
    }

    return c;
}

int main(void) {
    int num;

    scanf("%d", &num);
    printf("%d", fibo(num));

    return 0;
}
```

```
● →  Tasks ./task7-4
  1
  0
● →  Tasks ./task7-4
  4
  2
● →  Tasks ./task7-4
  8
  13
○ →  Tasks
```

과제 07 – 5

```c
#include <stdio.h>

int factorial(int num) {
    int result = 1;

    for (int i=1; i<=num; i++) {
        result *= i;
    }

    return result;
}

int main(void) {
    int num;

    scanf("%d", &num);
    printf("%d", factorial(num));

    return 0;
}
```

```
● → Tasks ./task7-5
 1
 1
● → Tasks ./task7-5
 3
 6
● → Tasks ./task7-5
 5
 120
● → Tasks ./task7-5
 10
 3628800
○ → Tasks
```