

第一题

```
1 2
f(x)=0.241970
g(x)=0.316443
```

```
1 #include <stdio.h>
2 #include <cmath>
3 #define pi 3.1416
4 #pragma warning(disable: 4996)
5 int main() {
6     double x,y;
7     scanf("%lf %lf", &x,&y);
8     printf("f(x)=%lf\n", (1/(sqrt(2*pi))*exp(-x*x/2)));
9     printf("g(x)=%lf", (1.0/3.0) * sin(x * x + y * y) * cos(x +
10 y));
11
12     return 0;
13 }
```

第二题

1. $x=0$ 时为1, $x=1$ 时为0
2. 0
3. $a \in (-10, -5)$ 且 $b = c$ 时为1, 其余为0
4. 1
5. $0 < y < 5$ 且 $5 < b < 6$ 时为1, 其余为0
6. 1
7. $y < 2$ 且 $3 < x < 5$ 时为1, 其余为0

第三题

乙在说谎

```
1 #include <stdio.h>
2 int main() {
3     int a = 1, b = 0, c = 0;
4     b = 0;
5     c = 1;
6     b = 1;
7     if (a == 1 && b == 0 && c == 0) printf("甲在说谎");
8     a = 0, b = 1, c = 0;
9     b = 1;
10    c = 0;
11    b = 1;
12    if (a == 0 && b == 1 && c == 0) printf("乙在说谎");
13    a = 0, b = 0, c = 1;
14    b = 1;
15    c = 1;
16    if (a == 0 && b == 0 && c == 1) printf("丙在说谎");
17    return 0;
18 }
```

选做题

1只小鸡2只公鸡65只母鸡
3只小鸡1只公鸡65只母鸡
2只小鸡1只公鸡65只母鸡
1只小鸡1只公鸡65只母鸡

```
1 #include <stdio.h>
2 int main() {
3     int a, b, c;
4     for (c = 100; c > 0; c--) {
5         if (15 * c <= 1000) {
6             if (1000 - 15 * c >= 15) {
7                 int rest_ab = 1000 - 15 * c;
```

```
8         for (b = rest_ab / 10; b > 0; b--) {
9             int rest_a = rest_ab - 10 * b;
10            for (a = rest_a / 5; a > 0; a--) {
11                printf("%d只小鸡%d只公鸡%d只母鸡\n", a, b,
12                    c);
13            }
14            break;
15        }
16    }
17 }
18 return 0;
19 }
20
```