

第6回
計算機プログラミング演習
サンプルプログラム集

```
1      /*   for_test1.c   */
2
3      #include <stdio.h>
4
5      int main(void)
6      {
7          int i;
8
9          for (i = 1; i < 10; i++)
10         {
11             printf("i = %d\n", i);
12         }
13
14         return 0;
15     }
16
17
```

```
= 1
= 2
= 3
= 4
= 5
= 6
= 7
= 8
= 9
```

```
1  /* for_test1.c */
2
3  #include <stdio.h>
4
5  int main(void)
6  {
7      int i;
8
9      for (i = 1; i <= 10; i++)
10     {
11         printf("i = %d\n", i);
12     }
13
14     return 0;
15
16 }
17
```

```
= 1
= 2
= 3
= 4
= 5
= 6
= 7
= 8
= 9
= 10
```

```
1      /*   for_test1.c   */
2
3      #include <stdio.h>
4
5      int main(void)
6      {
7          int i;
8
9          for (i = 1; i <= 10; i = i + 2)
10         {
11             printf("i = %d\n", i);
12         }
13
14         return 0;
15     }
16
17
```

```
1-3057~05
==
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```

```
1      /*   for_test1.c   */
2
3      #include <stdio.h>
4
5      int main(void)
6      {
7          int i;
8
9          for (i = 10; i >= 1; i--)
10         {
11             printf("i = %d\n", i);
12         }
13
14         return 0;
15     }
16
17
```

```
i = 10
i = 9
i = 8
i = 7
i = 6
i = 5
i = 4
i = 3
i = 2
i = 1
```

```
1  /*   for_test2.c   */
2
3  #include <stdio.h>
4
5  int main(void)
6  {
7      int i;
8      int sum;
9      sum = 0;
10
11     for (i = 1; i <= 10; i++)
12     {
13         sum = sum + i;
14     }
15
16     printf("SUM = %d\n", sum);
17
18     return 0;
19
20 }
21
```

SUM = 55

1から10の間の3の倍数の個数 3

```
1  /*   for_test2.c   */
2
3  #include <stdio.h>
4
5  int main(void)
6  {
7      int i;
8      int count;
9      count = 0;
10
11     for (i = 1; i <= 10; i++)
12     {
13         if (i % 3 == 0)
14         {
15             count = count + 1;
16         }
17     }
18
19     printf("1から10の間の3の倍数の個数 %d\n", count);
20     return 0;
21 }
22
23
```

```

1  /*   for_test2.c   */
2
3  #define _CRT_SECURE_NO_WARNINGS 1
4  #include <stdio.h>
5
6  int main(void)
7  {
8      int i, a;
9      int sum = 0;
10
11     for (i = 1; i <= 10; i++)
12     {
13         scanf("%d", &a);
14
15         if (a < 0) { break; }
16
17         sum = sum + a;
18     }
19     printf("%d個の合計: %d\n", i - 1, sum);
20     return 0;
21
22
23 }
24

```

```

8
9
4
-1
3個の合計: 21

```



```

1  /*    for_test3.c    */
2
3  #include <stdio.h>
4  #include <math.h>
5
6  int main(void)
7  {
8      double th;
9
10     for (th = -3.1; th <= 3.1; th += 0.1)
11     {
12         printf("sin(%f) = %f\n", th, sin(th));
13     }
14
15     return 0;
16 }
17
18

```

```

sin(0.500000) = 0.479426
sin(0.600000) = 0.564642
sin(0.700000) = 0.644218
sin(0.800000) = 0.717356
sin(0.900000) = 0.783327
sin(1.000000) = 0.841471
sin(1.100000) = 0.891207
sin(1.200000) = 0.932039
sin(1.300000) = 0.963558
sin(1.400000) = 0.985450
sin(1.500000) = 0.997495
sin(1.600000) = 0.999574
sin(1.700000) = 0.991665
sin(1.800000) = 0.973848
sin(1.900000) = 0.946300
sin(2.000000) = 0.909297
sin(2.100000) = 0.863209
sin(2.200000) = 0.808496
sin(2.300000) = 0.745705
sin(2.400000) = 0.675463
sin(2.500000) = 0.598472
sin(2.600000) = 0.515501
sin(2.700000) = 0.427380
sin(2.800000) = 0.334988
sin(2.900000) = 0.239249
sin(3.000000) = 0.141120

```

```
1  /*   for_test3.c   */
2
3  #include <stdio.h>
4  #include <math.h>
5
6  int main(void)
7  {
8      double th;
9
10     for (th = -3.1; th <= 3.1; th += 0.1)
11     {
12         if (th == 0)
13         {
14             printf("sin(%f) = %f\n", th, sin(th));
15         }
16     }
17
18     return 0;
19 }
20
21
```

実行結果は何も表示
されない

```

1  /*   for_test3.c   */
2
3  #include <stdio.h>
4  #include <math.h>
5
6  int main(void)
7  {
8      double th;
9      int i;
10
11     for (i = -31; i <= 31; i++)
12     {
13         th = i * 0.1;
14         if (th == 0)
15         {
16             printf("sin(%f) = %f\n", th, sin(th));
17         }
18     }
19
20     return 0;
21 }
22
23

```

sin(0.000000) = 0.000000

```
1  /* for_test3.c */
2
3  #include <stdio.h>
4  #include <math.h>
5
6  int main(void)
7  {
8      double th;
9      int i;
10
11     for (i = -31; i <= 31; i++)
12     {
13         th = i * 0.1;
14         if (i == 0)
15         {
16             printf("sin(%f) = %f\n", th, sin(th));
17         }
18     }
19
20     return 0;
21 }
22
23
```

sin(0.000000) = 0.000000