# C++ Program Design/3e
# Chapter 5
# Answers to Self-Check Exercises

1. answer:
```
int Scale (int name1, double name2);
```

2. answer:
```
double Blend();
```

3. answer:
```
void Dither (double name1, double name2, float name3);
```

4. answer:
```
#include "stats.h"
```

5. answer:
```
#include <iostream>
```

6. answer:
```
#ifndef NO_MORE_Count_AND_Average
int Count = 0;
float Average = 1.0;
#define NO_MORE_Count_AND_Average
#endif
```

7. answer:
```
The statement makes all declarations in the std
namespace accessible without having to use the
namespace name and the scope resolution operator ::.
```

8. answer:
```
std::cout << "Fatal Error";
```

9. answer:
```
cerr, clog
```

10. answer:
```
cout << oct << HeadCount << endl;
```

11. answer:
```
This means that all numbers are expressed in the
requested base for the affected stream until another
base change is requested.
```

12. answer:
```
10
3156
```

13. answer:
```
123456789
     Hello
Good bye
```

14. answer:
```
$$$$3
```

15. answer:

```
123456789
$z    $
$z   $
```

16. answer:

```
123456789
$    z$
$   z$
```

17. answer: `1`

18. answer:

```
10
31 56
```

19. answer: `+16`

20. answer: `020`

21. answer: `rand()`

22. answer: `srand()`

23. answer:

```
#include <iostream>
#include <string>
#include <stdlib.h>
#include <time.h>
using namespace std;

int main() {
   srand((unsigned int) time(0));
   int heads = 0;
   for (int i=1; i<= 1000; ++i) {
      if (rand() % 2 == 1)
         ++heads;
   }
   cout << "Number of heads = " << heads << endl;

   return 0;
}
```

24. answer:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;

int main() {

   ifstream fin("data.txt");
   int value;
   int NbrOfOddIntegers = 0;
   while (fin >> value) {
      if (value % 2 == 1)
      ++NbrOfOddIntegers;
   }
   cout << "There are " << NbrOfOddIntegers
        << " odd number(s) inthe file data.txt." << endl;

   return 0;
}
```

25. answer:

```
assert(Count);
```

26. answer:

```
assert(Index(n) < 0);
```