1. First thing will assign the variable endline to the string “endl”, then you are going to see “endl”, and then “endl” again, and then the line will end, after this on the next line, you will see “endline”
2. It takes the number you add, then it will print a hashtag after it uses a while loop that runs again and again until all the appropriate spaces have been placed, after this the spaces will decrease as j increases and the range gets shorter and shorter creating a diagonal pattern
3. Solution to problem 3

#include <iostream>

1. **using** **namespace** std;
2. **int** main()
3. {
4. **int** len, j;
5. cout << "Enter a number: ";
6. cin >> len;
7. **for** (**int** i = 0; i < len; i++)
8. {
9. j = i+1;
10. **while**( j < len)
11. {
12. j++;
13. cout << " ";
14. }
15. cout << "#" << endl;
16. }
17. **return**( 0 );
18. }

4. #include <iostream>

**using** **namespace** std;

**int** main()

{

**int** len, j, i;

i = 0;

cout << "Enter a number: ";

cin >> len;

**do** {

i++;

j = i+1;

**while**( j <= len)

{

j++;

cout << " ";

}

cout << "#" << endl;

}

**while**(i <= len);

**return**( 0 );

}

5. #include <iostream>

**using** **namespace** std;

**int** main () {

// local variable declaration:

**int** weekday = 5;

**switch**(weekday) {

**case** 1 :

cout << "rainy days and mondays get me down" << endl;

**break**;

**case** 6 :

**case** 7 :

cout << "wonderful weekend" << endl;

**break**;

**case** 2 :

cout << "ruby tuesday" << endl;

**break**;

**default** :

cout << "regular day" << endl;

}

**return** 0;

}