

C/C++ Programming 1 - Assignment 1 Quiz Solutions

1. B
2. E
3. D
4. D
5. C
6. A
7. B
8. D

```
1 1. (0 points)
2 int main(void)
3 {
4     int Int;
5     // int char;           /* not legal */
6     // int 6_05;          /* not legal */
7     int printf;
8     int main;
9     // int 1234;          /* not legal */
10    // int +AB;           /* not legal */
11    int long_named_variable;
12    // int A$;           /* not legal */
13    // int A&;           /* not legal */
14    int MiXeD_CaSe_0000;
15    int Main;
16
17    return 0;
18 }
19
20
21 2. (0 points)
22 #include <iostream>
23 using namespace std;
24
25 int main()
26 {
27     // Initialized ONLY because they will be read before they are written...
28     int ax = 1, bx = 2, cat = 3, dx = 4, sum = 5, tom = 6;
29
30     ax++;           // most compact equivalent of: ax = ax + 1
31     ++ax;          // most compact equivalent of: ax = ax + 1
32
33     bx += 6;       // most compact equivalent of: bx = bx + 6
34
35     cat %= 7;      // most compact equivalent of: cat = cat % 7
36
37     dx *= 70;      // most compact equivalent of: dx = 70 * dx
38
39     --sum;         // most compact equivalent of: sum = sum - 1
40     sum--;         // most compact equivalent of: sum = sum - 1
41
42     tom -= 2;      // most compact equivalent of: tom = tom - 2
43
44     cout << "ax = " << ax << '\n';
45     cout << "bx = " << bx << '\n';
46     cout << "dx = " << dx << '\n';
47     cout << "cat = " << cat << '\n';
48     cout << "sum = " << sum << '\n';
49     cout << "tom = " << tom << '\n';
50
51     return 0;
52 }
53
```

```
1 3. (0 points)
2 #include <stdio.h>
3 #include <stdlib.h>
4
5 int main(void)
6 {
7     printf("In C/C++, the case of letters is significant.\n");
8     printf("main is where program execution begins.\n");
9     printf("A semicolon terminates most statements.\n");
10    printf("10%% of \"nothing\" is 100%% of \"nothing\"\n");
11    printf("Use \\n to cause a newline; use \\t to cause a tab.\n");
12    printf("Use \\a to cause a beep (only on some platforms)!\n");
13
14    return(EXIT_SUCCESS);
15 }
16
17
18 4. (0 points)
19 #include <iostream>
20 #include <cstdlib>
21 using namespace std;
22
23 int main()
24 {
25     cout << "In C/C++, the case of letters is significant.\n";
26     cout << "main is where program execution begins.\n";
27     cout << "A semicolon terminates most statements.\n";
28     cout << "10% of \"nothing\" is 100% of \"nothing\"\n";
29     cout << "Use \\n to cause a newline; use \\t to cause a tab.\n";
30     cout << "Use \\a to cause a beep (only on some platforms)!\n";
31
32     return(EXIT_SUCCESS);
33 }
34
35
36 5. (0 points)
37 #include <stdio.h>
38 #include <stdlib.h>
39
40 int main(void)
41 {
42     double x, answer;
43
44     x = 2.55;
45     answer = 3 * x * x * x - 5 * x * x + 6;
46     printf("if x = %f, 3(x exp 3) - 5(x exp 2) + 6 = %f\n", x, answer);
47
48     return(EXIT_SUCCESS);
49 }
50
```

```
1 6. (0 points)
2 #include <iostream>
3 #include <cstdlib>
4 using namespace std;
5
6 int main()
7 {
8     int x;
9
10    cout << "Respectively:\n";
11    x = 7;
12    cout << dec << x << " in hex, decimal, and octal is " << hex << x << ", "
13        << dec << x << ", and " << oct << x << '\n';
14    x = 8;
15    cout << dec << x << " in hex, decimal, and octal is " << hex << x << ", "
16        << dec << x << ", and " << oct << x << '\n';
17    x = 15;
18    cout << dec << x << " in hex, decimal, and octal is " << hex << x << ", "
19        << dec << x << ", and " << oct << x << '\n';
20    x = 16;
21    cout << dec << x << " in hex, decimal, and octal is " << hex << x << ", "
22        << dec << x << ", and " << oct << x << '\n';
23    x = -1;
24    cout << dec << x << " in hex, decimal, and octal is " << hex << x << ", "
25        << dec << x << ", and " << oct << x << '\n';
26
27    return(EXIT_SUCCESS);
28 }
29
30 7. (0 points)
31 #include <stdio.h>
32 #include <stdlib.h>
33
34 int main(void)
35 {
36     int x;
37
38     printf("Respectively:\n");
39     x = 7;
40     printf("%d in hex, decimal, and octal is %x, %d, and %o\n", x, x, x, x);
41     x = 8;
42     printf("%d in hex, decimal, and octal is %x, %d, and %o\n", x, x, x, x);
43     x = 15;
44     printf("%d in hex, decimal, and octal is %x, %d, and %o\n", x, x, x, x);
45     x = 16;
46     printf("%d in hex, decimal, and octal is %x, %d, and %o\n", x, x, x, x);
47     x = -1;
48     printf("%d in hex, decimal, and octal is %x, %d, and %o\n", x, x, x, x);
49
50     return(EXIT_SUCCESS);
51 }
52
```

C/C++ Programming 1 - Assignment 1 Exercise Solutions

8. (0 points)

Expression	Equivalent Expression	Value
$a / b / c$	$(a / b) / c$	0
$7 + c * -- d / e$	$7 + ((c * (-- d)) / e)$	4
$2 * a \% - b + c + 1$	$((2 * a) \% (- b)) + c + 1$	7
$39 / - ++ e - + 29 \% c$	$(39 / (- (++ e))) - ((+ 29) \% c)$	-7
$a += b += c += 1 + 2$	$a += (b += (c += (1 + 2)))$	7
$7 - + ++ a \% (3 + b)$	$7 - ((+ (++ a)) \% (3 + b))$	error!

```

12 #include <stdio.h>
13 #include <stdlib.h>
14
15 int main(void)
16 {
17     /*
18      * For consistency with the expressions in the original expression table,
19      * the same spacing style violations have been deliberately reproduced
20      * in the code below.
21      */
22     int a = 2, b = -3, c = 5, d = -7, e = 11;
23
24     printf("%d\n", a / b / c);
25     printf("%d\n\n", (a / b) / c);
26
27     printf("%d\n", 7 + c * -- d / e);
28     d = -7; /* because d was previously changed */
29     printf("%d\n\n", 7 + ((c * (-- d)) / e));
30     d = -7; /* because d was previously changed */
31
32     printf("%d\n", 2 * a \% - b + c + 1);
33     printf("%d\n\n", ((2 * a) \% (- b)) + c + 1);
34
35     printf("%d\n", 39 / - ++ e - + 29 \% c);
36     e = 11; /* because e was previously changed */
37     printf("%d\n\n", (39 / (- (++ e))) - ((+ 29) \% c));
38     e = 11; /* because e was previously changed */
39
40     printf("%d\n", a += b += c += 1 + 2);
41     a = 2; /* because a was previously changed */
42     b = -3; /* because b was previously changed */
43     c = 5; /* because c was previously changed */
44     printf("%d\n\n", a += (b += (c += (1 + 2))));
45     a = 2; /* because a was previously changed */
46     b = -3; /* because b was previously changed */
47     c = 5; /* because c was previously changed */
48
49     printf("%d\n", 7 - + ++ a \% (3 + b));
50     a = 2; /* because a was changed */
51     printf("%d\n\n", 7 - ((+ (++ a)) \% (3 + b)));
52
53     return(EXIT_SUCCESS);
54 }

```