

## 1. What does C++ print?

Write out what the code snippets would output. If an error occurs, describe the error. The first has been done for you. Assume that we have included the `<iostream>`, `<cmath>`, `<string>` libraries, and that we are using the standard namespace.

<pre>int x = 42; cout &lt;&lt; x + 1;</pre>	<b>43</b>
<pre>int i = 24; int j = 2; i *= j; cout &lt;&lt; i &lt;&lt; " " &lt;&lt; j;</pre>	
<pre>int myage = 42; int myage += 1; cout &lt;&lt; "birthday: " &lt;&lt; myage;</pre>	
<pre>int a = 13 % 12; cout &lt;&lt; a &lt;&lt; " " &lt;&lt; a % 1;</pre>	

## 2. cin city

For each of the code and user-input, write the output. If cin enters a failure state, or the program hangs/pauses, please explain why. The first has been done for you.

Code	User Input
<pre>int x; cin &gt;&gt; x; cout &lt;&lt; "x is: " &lt;&lt; x;</pre>	42<ENTER>

**Output:**

<b>x is: 42</b>
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**2.a**

Code	User Input
<pre>int x, y; cin &gt;&gt; y &gt;&gt; x; cout &lt;&lt; x &lt;&lt; " " &lt;&lt; y;</pre>	2 4<ENTER>

**Output:**

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**2.b**

Code	User Input
<pre>int x = 0, y = 1; cin &gt;&gt; x &gt;&gt; y; cout &lt;&lt; x &lt;&lt; " " &lt;&lt; y;</pre>	24<ENTER>

**Output:****2.c**

Code	User Input
<pre>int x = 0, y = 1; cin &gt;&gt; x &gt;&gt; y; cout &lt;&lt; x &lt;&lt; " " &lt;&lt; y;</pre>	<ENTER>

**Output:****2.d**

Code	User Input
<pre>int a = 1; double b = 0.1; cin &gt;&gt; b &gt;&gt; b &gt;&gt; a; cout &lt;&lt; a &lt;&lt; " " &lt;&lt; b;</pre>	.1.23 4<ENTER>

**Output:****2.e**

Code	User Input
<pre>double d1 = 0; string s1; cin &gt;&gt; d1 &gt;&gt; s1; cout &lt;&lt; d1 &lt;&lt; " " &lt;&lt; s1;</pre>	0.12meow<ENTER>

**Output:**

## 2.f

Code	User Input
<pre>double d1 = 3; string s1; cin &gt;&gt; s1 &gt;&gt; d1; cout &lt;&lt; d1 &lt;&lt; " " &lt;&lt; s1;</pre>	0.12meow0.50<ENTER>

**Output:**

## 2.g

Code	User Input
<pre>string s1; int i1 = 1; double d1; cin &gt;&gt; s1 &gt;&gt; s1 &gt;&gt; i1; cin.clear(); cin &gt;&gt; d1 &gt;&gt; s1; cout &lt;&lt; s1 &lt;&lt; " " &lt;&lt; i1 &lt;&lt; " " &lt;&lt; d1;</pre>	this is .50 cent<ENTER>

**Output:**

## 3. Code Review

Louis Reasoner is at it again, getting better every night at programming. Can you spot any mistakes in his latest program?

```
using namespace std;
int main (
    string myname;
    cout << "Please enter your name: ";
    cin << myname;
    cout << "How old are you?" << \n;
    cin >> myage;
    cout >> "In 10 years, myname will be myage+10 years old!" << endl;
    string myname = "Louis";
    cout >> "Programmed by: " << myname;
    return 0;
)
```

## 4. Reverse Engineer Causes Mayhem At Local Factory

Circle the inputs to cin that will produce the desired output. Multiple answers may be correct.

4.a

Code	Desired Output
<pre>string a; int b; int c; cin &gt;&gt; a &gt;&gt; b &gt;&gt; c; cout &lt;&lt; b &lt;&lt; " " &lt;&lt; c;</pre>	42 2

cin Input (Circle correct choices)

- (A) hi 422<ENTER>
- (B) hi42 2<ENTER>
- (C) hi 42 2<ENTER>
- (D) hi422<ENTER>

4.b

<pre>string s1; double d1; cin &gt;&gt; s1 &gt;&gt; s1 &gt;&gt; d1 &gt;&gt; d1; cout &lt;&lt; s1 &lt;&lt; " " &lt;&lt; d1;</pre>	alpha 0.5
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cin Input:

- (A) alpha 0.5<ENTER>
- (B) alpha alpha 0.5 0.5<ENTER>
- (C) alpha0.5 alpha 0.5 0.5<ENTER>
- (D) alpha 0.5 alpha 0.5<ENTER>

4.c

<pre>double d1 = 1.1; int i1 = 2; string s1; cin &gt;&gt; d1 &gt;&gt; i1 &gt;&gt; i1; cin &gt;&gt; s1; cin.clear(); cin &gt;&gt; d1; cin &gt;&gt; s1; cout &lt;&lt; d1 &lt;&lt; " " &lt;&lt; s1 &lt;&lt; " " &lt;&lt; i1;</pre>	0.3 .4.5 2
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cin Input:

- (A) 0.12.3.4.5<ENTER>
- (B) 0.3 2 2 a 0.3 .4.5<ENTER>
- (C) .3.3 .4.5<ENTER>
- (D) 12.3.3 .4.5<ENTER>