

What will be the output of the following program? Show the exact contents of each output line, for each character position (use _ to represent space)

```
int main ()
{
    cout << fixed<< setprecision(3)<< setw(8)<< 3.14159<<endl <<
    setw(8)<<100.52<< endl;
}
```

ANSWER

11111111112 ← column counter for counting spaces

12345678901234567890 ← from 1 to 20

What will be the output of the following program?

```
int main () // generate sum
{
    int i = 1;
    const int max = 10;
    int sum = 0;
    do
    {
        cout << i << endl;
        sum += i;
        i++;
    }
    while (sum <= max);
    cout << sum << endl;
}
```

PROGRAM OUTPUT

Describe what this code does by filling in the blanks where the comments are at.

```
// This program _____
```

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

```
int main ()
{
  // _____
  int a = 100;

  // _____
  if( a < 20 )
  {
    // _____
    cout << "a is less than 20;" << endl;
  }
  else
  {
    // _____
    cout << "a is not less than 20;" << endl;
  }
  cout << "value of a is : " << a << endl;

  return 0;
}
```

Fill in the blank with the final value of field_x? (Pay "close" attention to the assumed initial values)

```
____ if ((balance == 0) && (state_code > 5) | Assumed Initial Values
      && (credit_code >= 3)) |-----
  {                               | balance = 0;
      field_x = 1;                 | state_code = 6;
  }                                 | credit_code = 2;
else                                 |
  {                                 |
      field_x = 0;                 |
  }                                 |
```

```

__ if ((balance == 10) || (state_code < 3) | Assumed Initial Values
      || (field_x >= 3)) |-----
    { | balance = 100;
      field_x = 3; | state_code = 5;
    } | field_x = 2;
  else |
    { |
      field_x += 2; |
    } |

```

Identify the errors in this problem by drawing an arrow to the problem piece of code. For each error identified, tell why it is a problem. Finally, explain how you would fix each of the problems.

```

// This program uses an if/else if statement to assign a
// letter grade (A, B, C, D, or F) to a numeric test score.
#include <iostream>
using namespace std;

int main()
{
    int testScore;

    cout << "Enter your test score and I will tell you\n";
    cout << "the letter grade you earned: ";
    cin >> testScore;
    if (testScore < 60)
        cout << "Your grade is F.\n";
    else if (testScore < 70)
        cout << "Your grade is D.\n";
    else if (testScore < 80)
        cout << "Your grade is C.\n";
    else if (testScore < 90)
        cout << "Your grade is B.\n";
    else
        cout << "That is not a valid score.\n";
    else if (testScore <= 100)
        cout << "Your grade is A.\n";

    return 0;
}

```