Name _____

Here is some pseudocode to solve several different problems. The purpose of this assignment is to determine that you understand the flow of logic. You will be determining what is printed in the output statement at the end of each. Then, provide the corresponding flowchart for each. There are no (intentional) errors in the pseudocode.

Question #1

```
{
        float price = 56.95;
        float tax = 1.05;
        float total = 0;

        total = price * tax;

        print total;
}
```

Output _____

Question #2

```
{
        int x = 5, y = 3;
        int result;

        result = sqr(x) * sqr(y);

        print result;
}
```

Output _____

Question #3
```
{
        int a, b;
        int c, d;

        a = 12;
        b = a;
        c = b + b;
        d = ( a + b ) * ( c − a );

        print d;
}
```
Output _____

Question #4

```
{
        float score1, score2;
        float average;
        string grade;

        score1 = 81.5;
        score2 = 95.0;
        average = ( score1 + score2 ) / 2;
        if ( average > 90 ) then
           grade = "A";
        else
           grade = "B";

        print grade;
}
```

Output _____

Question #5
```
{
        int x = 1, y = 2, z = 10;

        if ( x < 5 || x < -1) then
           print x;
        else-if ( y > 5 ) then
           print y;
        else
           print z;
}
```
Output _____

Question #6

```
{
        float a = 5.50, b = 25.7, c = 17.63;
        float total1, total2;
        total1 = a + c;
        total2 = a + b;

        if ( ( total1 <= 50 ) && ( total1 >= 32 ) ) then
           print total1;
        else-if ( total2 > 28 ) then
           print total2;
        else
           print a;
}
```

Output _____

Question #7

```
{
        int score1 = 88, score2 = 44;
        string pass = "I passed!";
        string fail = "I failed!";

        if ( score1 > 80 ) then
          print pass;
        else
          print fail;
}
```

Output _____

Question #8

```
{
        int x = 100;
        string yes = "HELLO";
        string no = "GOODBYE";

        if ( x != 100 ) then
          print yes;
        else
          print no;
}
```

Output _____

Question #9

```
{
        float total = 200;
        int i;

        for (i=1; i<=5; i++)
        {
                total = total / 2;
        }
        print total;
}
```

Output _____

Question #10

```
{
        float price = 556.75;
        float salesTax = 1.09;
        float stateTax = 1.06;
        float total = 0;
        int i;

        for (i=1; i<4; i++)
        {
                if ( i <= 2 )
                   total = price * salesTax;
                else
                   total = price * stateTax;
        }

        print total;
}
```
Output _____

Question #11
```
{
        int total = 0;
        int count = 0;

        while ( count <= 15 )
        {
                total = total * count;
                count = count + 2;
        }

        print total;
        print count;
}
```
Output _____

Question #12

Joe Boone
Christopher Brown
Mia Hide
Abraham White
Matthew Downing
~

```
{
        string employeeName;

        get employeeName;

        while ( != EOF )
        {
                print employeeName;
                get employeeName;
        }
}
```
Output _____

Question #13
```
{
        int product = 2;

        while ( product <= 50)
        {
                product = product * 2;
        }

        print product;
}
```
Output _____

Question #14

```
{
    int i;

    for (i=1; i<=10; i++)
    {
        print sqr(i);
    }
}
```

Output _____

Question #15

Input File

```
98
25
23
79
981
456
279
39
12
107
~
```

```
{
        int count = 1, value = 0;
        int num1 = 25;
        int num2 = 55;

        get value;

        while ( ( count >= 0 ) && ( count < 50 ) && ( != EOF ) )
        {
                if ( value < 225 ) then
                   value = value + num2;
                else
                   value = value + num1;

                print value;
                count = count * 2;

                get value;
        }
}
```
Output _____

Question #16

```
B
C
D
F
B
A
A
~
```

```
{
        float cost = 0;
        string class;

        get class;

        while ( != EOF )
        {
                case based on class:
                        case "A"
                                cost = 50.75;
                        case "B"
                                cost = 40.75;
                        case "C"
                                cost = 30.75;
                        case "D"
                                cost = 20.50;
                        case "E"
                                cost = 10.50;
                        default
                                cost = 5.00;

                print cost;

                get class;
        }
}
```

Output _____

Question #17

```
{
        float x = 100;

        while ( x != 100 )
        {
                x = x / 2;
        }

        print x;
}
```
Output _____

Question #18

```
{
        int count;
        float total = 568978;

        for (count=10; count>2; count--)
        {
                if ( ( count > 5 ) || ( count != 15 ) ) then
                    total = total * ( count / 2 );
        }

        print total;
}
```
Output _____

Question #19

```
{
        int x = 1, i = 1;

        while ( i > 0 )
        {
                x = x *24;

                i = i +1;
        }

        print x;
        print i;
}
```
Output _____

Question #20

<u>Input File</u>

```
98
78
23
65
78
45
65
54
12
33
~
```

```
{
        int num, max = 0;

        get num;
        max = num;

        while ( != EOF )
        {
                if ( num > max ) then
                    max = num;

                get num;
        }

        print max;
}
```
Output _____

Bonus Question:
In question #20, what is the function of the pseudocode? (In other words, what is it computing?)