apaw10.1 Name _____

What are the two things we need to have to make a recursive algorithm?

Given this function definition

```
double What(int one, double two)
{
    if (0 == one)
        return two;
    else
        return What(one - 1, two * 5.0)
}
```

what is the value of *x* after each of the following function calls?

a. x = What(1, 2.0);

b. x = What(2, 2.0);

c. x = What(-1, 3.0);

How many times will the function be called recursively for an initial call of
x = What(40, 0.02);

Given this function definition

```
int Add(int n)
{
    if (0 == n)
        return 1;
    else
        return Add(n-1) + n;
}
```

what is the value of *z* after each of the following function calls?

a. z = Add(1);

b. z = Add(0);

c. z = Add(10);

How many times will the function be called recursively for an initial call of
z = Add(100);

Find and correct the errors in the following recursive function that returns the sum of the integers from a to b inclusively. Give a precondition for this function so that it will work as intended.

```
void Try(int a, int b)
{
    if (a == b)
        return a;
    else
        a + Try(a + 1, b);
}
```