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**Problem 1**

1. True. The function *foo1* will always return the same value as three.
2. False. The initial value of a ptr is not assigned in the program.
3. False. The only way to exit this program is to let continue1 equal to 0.
4. False. But scanf(“%d”,ptr); is the same as scanf(“%d”,&num). Ptr point the address of num but ptr does not point the address of num2.

1. False. The return value of the function foo does rely on user input. It returns the value as return\*a+4.
2. True. We could change else if(\*ptr==2) to else if(num==2) and have the same program. Ptr is pointing to address of num in the program and “\*ptr” will return the value of num.
3. False. For this line: printf(“\n\nEnter a number: 1,2 or 2 to quit: \n”); the while loop would still run if the user entered 9 since any other value other than 0 would be considered as “false”
4. True. The functions foo and foo1 have the same number of parameter as 1 parameter. Function foo have a parameter as “ a” and the function foo1 have a parameter as “w”.

1. True. For this line: num2=foo(ptr); we could pass in &num and still have the same result since ptr is pointing to address of num in the program.
2. False. The unary operator used in this code are ++(pre-increment), and \*ptr(dereference).

**Problem 2**

1. Depending on the temperature and the number of birds, the total number of flowers in Jon’s garden goes up or down. (function declaration)

Possible Solution:

/\* The number of flowers (as integer) in Jon’s garden is the return result of the function\*/

int number\_flowers(float temperature, int num\_birds);

2. I lost half of my money in the stock market last year

Possible Solution:

/\* Code start \*/

float money\_I\_had;

printf("Last year, the money I had was : $");

scanf("%f", &money\_I\_had);

money\_I\_had = money\_I\_had / 2;

printf("After I lost half of my money in stock, the money I was left with: $%.2f", money\_I\_had);

/\* Code end \*/

3. The hotel got a shipment of 50 new beach umbrellas.

Possible Solution:

/\* Code start \*/

int num\_beach\_umbrellas;

printf("The count of beach umbrellas Hotel has: ");

scanf("%d", &num\_beach\_umbrellas);

num\_beach\_umbrellas = num\_beach\_umbrellas + 50;

printf("After new shipment, the count of beach umbrellas, Hotel has: %d", num\_beach\_umbrellas);

/\* Code end \*/

4. The number of customers always varies when it rains or the minimum wage falls below $9.50. (function declaration)

Possible Solution:

/\* The number of customers is return result, two inputs to the function are an int telling if it rains, other is the minimum wage.\*/

int number\_customers(int isRain, float min\_Wage);