

Test Prep & Review

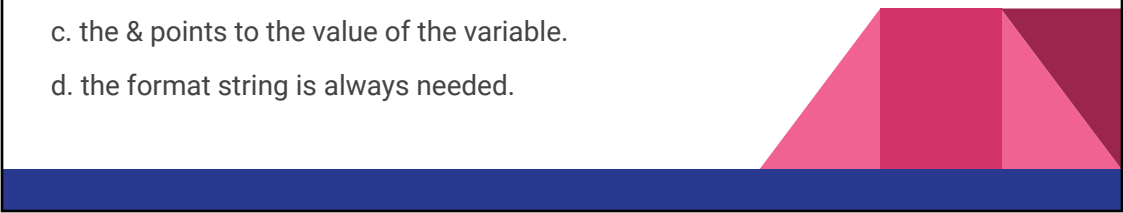
Up to and including FOR loops

What does the test look like?

- A fair bit of Multiple Choice
- A few Long Answer questions

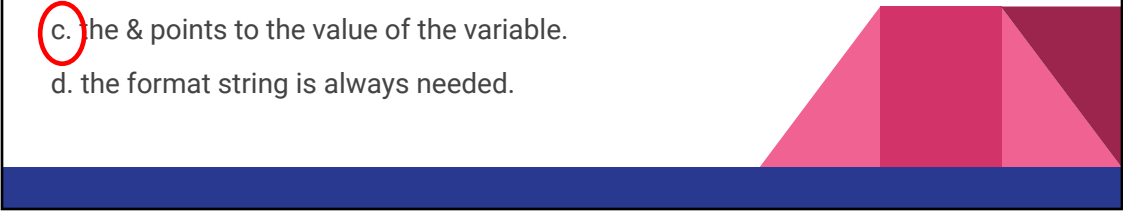
Multiple Choice Examples

Examples:

1. To begin a single line comment, use the following symbol:
a) ' b) // c) */ d) /* e) :
 2. When using scanf which of the following is NOT true:
 - a. the & is needed to pass the address of the variable.
 - b. the & allows for two-way communication.
 - c. the & points to the value of the variable.
 - d. the format string is always needed.
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Multiple Choice Examples (cont.)

3. Consider the following code segment

```
if (n != 0 && x / n > 100)
    statement1;
else
    Statement2;
```

If `n` is of type `int` and has a value of 0 when the segment is executed, what will happen?

- a. Your program will crash when it executes this instruction.
- b. A syntax error will occur.
- c. *statement1*, but not *statement2*, will be executed
- d. *statement2*, but not *statement1*, will be executed
- e. Neither *statement1* nor *statement2* will be executed; control will pass to the first statement following the *if* statement

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Long Answer Question Example

The following block of code should ask the user for a low number and a high number. It should use a FOR LOOP to display all numbers in between (and including) these two numbers. Do not declare any additional variables.

```
int main() {  
    int x, highNum, lowNum;
```

Example

Low number: 8
High number: 14

8
9
10
11
12
13
14

Let's Review!

Default template

```
#include <stdio.h>

int main() {
    //Code goes here

    return 0;
}
```

Declaring Variables

```
TYPE variable_name;
```

examples:

```
int num1;
double num2;
float num3;
char letter1;
```

Conditional Statements

```
int num1=0;

if (num1 == 42) {
    //do something
} else if (num1 < 42) {
    //do something else
} else if (num1 >= 43) {
    // do something else
} else {
    // something else
}
```

```
//kinds of logic
if (num1 > 10 && num1 < 100) {}
    //AND

if (num1 > 10 || num1 < 100) {}
    //OR

if (num1 != 0) {}
    //NOT equal

if (num1 % 2 == 0) {}
    //REMAINDER of num1 / 2
```

ScanF Statements

```
int readNumber;
float readFloat;
char readCharacter;

printf("Give me a number please: ");
scanf("%i",&readNumber); //NOTE THE AMPERSAND


printf("Give me a decimal number please: ");
scanf("%f",&readFloat); //NOTE THE AMPERSAND

printf("Give me a character please: ");
scanf("%c",&readCharacter); //NOTE THE AMPERSAND
```

FOR Loops

```
// for (a ; b ; c)
//a = initialize variable(s)
//b = condition to keep looping
//c = code to run at end of loop (usually increment)

//Example
for (x = 0; x < 1000; x=x+1) {
    //do something 1000 times
}
```




WHILE Loops

```
//WHILE Loop
while (x < 1000) {
    //DO SOMETHING
}

//DO WHILE LOOP
do {

} while (x < 1000); //NOTE THE SEMICOLON
```

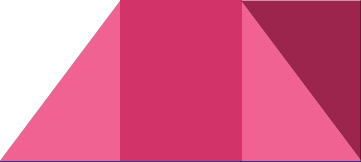


Functions

```
int add(int num1, int num2);
```

```
int main() {  
    int result = add(38,4);  
    return 0;  
}
```

```
//NOTE: OUTSIDE MAIN FUNCTION  
int add(int num1, int num2) {  
    return num1+num2;  
}
```



Questions? Demos?

If you had an IEP and want accommodations, email me or ask