

## Answers to Questions from Pass Task 2.1

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1: Assume that age has the value 0. List the actions the computer executes when it runs the following code.

```
printf("Message 0");  
while (age < 5){  
    printf("Message 1");  
    age = age + 1;  
}  
printf('Message 2')
```

Sequence	Action	Note
1	Calls the printf procedure with the text 'Message 0'	
2	Evaluates the expression (condition of while) age < 5	Condition is true.
3	Jumps into the while loop	
4	Calls the printf procedure with the text 'Message 1'	
5	Variable 'Age' increases by 1	Age now 1
6	Returns to the top of the while loop	
7	Evaluates the expression (condition of while) age < 5	Condition is true.
8	Jumps into the while loop	
9	Calls the printf procedure with the text 'Message 1'	
10	Variable 'Age' increases by 1	Age now 2
11	Returns to the top of the while loop	
12	Evaluates the expression (condition of while) age < 5	Condition is true.
13	Jumps into the while loop	
14	Calls the printf procedure with the text 'Message 1'	
15	Variable 'Age' increases by 1	Age now 3
16	Returns to the top of the while loop	
17	Evaluates the expression (condition of while) age < 5	Condition is true.
18	Jumps into the while loop	
19	Calls the printf procedure with the text 'Message 1'	
18	Variable 'Age' increases by 1	Age now 4
19	Returns to the top of the while loop	
20	Evaluates the expression (condition of while) age < 5	Condition is true.
21	Jumps into the while loop	
22	Calls the printf procedure with the text 'Message 1'	
23	Variable 'Age' increases by 1	Age now 5
24	Jumps to the end of the while loop	
22	Calls the printf procedure with the text 'Message 2'	

2. Assume that age has the value 8. List the actions the computer executes when it runs the following code.

```
printf("Message 0");  
while (age > 5){  
    printf("Message 1");  
    age = age - 2;  
}  
printf("Message 2");
```

Sequence	Action	Note
1	Calls the printf procedure with the text 'Message 0'	
2	Evaluates the expression (condition of while) age > 5	Condition is true.
3	Jumps into the while loop	
4	Calls the printf procedure with the text 'Message 1'	
5	Variable 'age' decreases by 2	Age now 6
6	Returns to the top of the while loop	
7	Evaluates the expression (condition of while) age > 5	Condition is true.
8	Jumps into the while loop	
9	Calls the printf procedure with the text 'Message 1'	
10	Variable 'age' decreases by 2	Age now 4
11	Evaluates the expression (condition of while) age > 5	Condition is false.
12	Jumps to the end of the while loop	
13	Calls the printf procedure with the text 'Message 2'	

End of Task