

- 8.1. [20 points] Define a minimal set of MC/DC (Modified Condition/Decision Coverage) tests for $(!a) \mid (b \& c)$ — in words, “not a or (b and c).” Why is your answer a minimal set?

	a	(!a)	b	c	(!a) (b & c)	(!a)	b	c
1	T	F	T	T	T	6	3	2
2	T	F	T	F	F	7	1	1
3	T	F	F	T	F	8		
4	T	F	F	F	F			
5	F	T	T	T	T	2		
6	F	T	T	F	T	3		
7	F	T	F	T	T	4		
8	F	T	F	F	T			

For $(!a)$: pair 2,6 , pair 3,7 and pair 4,8

pair 1,3 to test the ~~outcome~~^{effect} of b on the outcome

pair 1,2 to test the effect of c on the outcome

So, the minimum set are:

1,2,3,6 or 1,2,3,7

8.2

Parameter Testing

This corresponds to the **Unit tests** and **Functional tests**. Because this process focuses on each component.

Assembly Testing

This corresponds to the **Integration tests**. Because the description says the “system is gradually assembled and tested” which refers to the Integration tests (combinations of unit).

System Evaluation

This should be the **System tests** since as the description says, the system is to be tested as completed.

Shakedown

This corresponds to the **Acceptance tests**, since the completed system will be tested in its environment as the description says.