

Problem #1:

A: Branch testing

List of branches: 4T,4F, 5T, 5F, 9T, 9F, 13T, 13F, 15T, 15F, 16T, 16F, 18T, 18F, 20T, 20F, 21T,21F

Test #1: a=2 b=2, c=3

Branches covered: 4T,4F, 5F, 9F, 13F, 15T, 16F, 18T, 18F, 20T, 21F

Test #2: a=1 b=2, c=3

Additional branches covered: 13T, 15F

Test #3: a=3, b=3, c=3

Additional branches covered: 5T, 9T, 13F, 16T

Test #4: a=5, b=4, c=3

Additional branches covered: 21T

Non-Executable Branch: 20F.

B: Multiple Condition testing

Testcase	a	b	c
T1	2	2	3
T2	3	3	3
T3	3	4	5
T4	5	4	5
T5	4	5	5

Condition 1: if ((a == c) || (b == c))

a == c	b == c	Testcase
T	T	T2
T	F	T4
F	T	T5
F	F	T1

Condition 2: if ((type==0)&&(a == b))

type == 0	a == b	Testcase
T	T	T1
T	F	T3
F	T	T2
F	F	T4

Condition 3: if ((a*a+b*b==c*c) || (a*a+c*c==b*b))

(a*a+b*b==c*c)	(a*a+c*c==b*b)	Testcase
T	T	Non-executable
T	F	T3
F	T	Non-executable
F	F	T1