The two circuits for: 01101100

V1:((((a.b).c).c).((a.c).(b.0))) numGates :7 Actual: 7

V2:((((a.b).a).((a.c).b)).((a.c).(b.0))) numGates: 9 Actual: 8

The two circuits for: 11011010

V1:((((a.b).(a.c)).(a.b)).((a.0).(c.0))) numGates :8 Actual: 8

V2:(((((a.b).a).c).((a.c).a)).0) numGates: 7 Actual:7

The two circuits for: 01101010

V1:((((a.b).c).c).((a.b).(c.0))) numGates :7 Actual:6

V2:(((((a.b).0).(a.c)).((a.b).c)).0) numGates: 8 Actual:7

The two circuits for: 01111111

V1:((((a.b).c).c).0) numGates :4 Actual:4

V2:((((a.b).a).((a.c).0)).0) numGates: 6 Actual:6

The two circuits for: 01111000

V1:((((a.b).c).c).((a.0).(b.c))) numGates :7 Actual:7

V2:((((a.b).a).((a.c).b)).((a.0).(b.c))) numGates: 9 Actual:9

The two circuits for: 00010111

V1:((((a.b).(a.c)).a).(b.c)) numGates :6 Actual:6

V2:((((a.b).(a.c)).(b.c)).(b.c)) numGates: 6 Actual:6

The two circuits for: 10010010

V1:((((a.b).a).(c.0)).(((a.c).(b.c)).(a.b))) numGates :10 Actual:9

V2:(((((a.b).a).c).((a.c).a)).((a.c).b)) numGates: 9 Actual:8

Other Test cases:

((((a.b).c).a).((((a.b).c).a).b)) Gates = 5

((((a.b).((b.c).(a.b))).(((a.b).((b.c).(a.b))).c)).((a.b).((b.c).(a.b)))) Gates = 7

((((a.b).((b.c).(a.b))).(((a.b).((b.c).(a.b))).c)).(((a.b).((b.c).(a.b))).c)) Gates = 7

((((a.b).a).(c.0)).(((a.c).(b.c)).(a.b))) Gates = 9

(((a.b).a).(((a.b).a).(a.b))) Gates = 5

((((a.b).(b.c)).((a.b).(a.c))).((a.b).c))

(((a.b).a).(((a.b).a).(a.b))) Gates = 4