

Quiz 9 – to be finished in 15 minutes

Student Name:

Derive a Boolean equation.

CD \ AB	AB	$\sim A \sim B$	$\sim AB$	AB	$A \sim B$
$\sim C \sim D$	1	1	1		1
$\sim CD$	1				1
CD	1	1	1	1	1
$C \sim D$	1	1	1	1	1

$$F = \sim B + C + \sim A \sim D$$

The equation can also be obtained using the following table

CD \ AB	AB	$\sim A \sim B$	$\sim AB$	AB	$A \sim B$
$\sim C \sim D$	1	1	1	0	1
$\sim CD$	1		0	0	1
CD	1	1	1	1	1
$C \sim D$	1	1	1	1	1

$$\sim F = AB \sim C + B \sim CD = B \sim C(A + D)$$

$$F = \sim(B \sim C(A + D)) = \sim B + C + \sim A \sim D$$