

# TUGAS KMAP

Anggota kelompok :

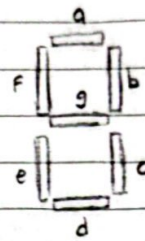
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a. Input :  $W, x, y, z$

b. output :  $2^4 = 16$

c. Tabel kebenaran

W	x	y	z	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1
1	0	1	0	0	0	0	0	0	0	1
1	0	1	1	0	0	0	0	0	0	1
1	1	0	0	0	0	0	0	0	0	1
1	1	0	1	0	0	0	0	0	0	1
1	1	1	0	0	0	0	0	0	0	1
1	1	1	1	0	0	0	0	0	0	1



d. K-Map

a)

$Wx \backslash yz$	$\bar{y}\bar{z}$	$\bar{y}z$	$y\bar{z}$	$yz$
$\bar{W}\bar{x}$	1	0	1	1
$\bar{W}x$	0	1	1	1
$W\bar{x}$	0	0	0	0
$Wx$	1	1	0	0

$$a = \bar{W}y + \bar{W}xz + \bar{x}\bar{y}\bar{z} + W\bar{x}\bar{y}$$

b)

$Wx \backslash yz$	$\bar{y}\bar{z}$	$\bar{y}z$	$y\bar{z}$	$yz$
$\bar{W}\bar{x}$	1	1	1	1
$\bar{W}x$	1	0	1	0
$W\bar{x}$	0	0	0	0
$Wx$	1	1	0	0

$$b = \bar{W}\bar{x} + \bar{W}\bar{y}\bar{z} + \bar{x}\bar{y} + \bar{W}yz$$

c)

$W \backslash YZ$	$\bar{Y}\bar{Z}$	$\bar{Y}Z$	$YZ$	$Y\bar{Z}$
$\bar{W}\bar{X}$	1	1	1	0
$\bar{W}X$	1	1	1	1
$W\bar{X}$	0	0	0	0
$WX$	1	1	0	0

$$c = \bar{W}X + \bar{X}\bar{Y} + \bar{W}Z$$

d)

$W \backslash YZ$	$\bar{Y}\bar{Z}$	$\bar{Y}Z$	$YZ$	$Y\bar{Z}$
$\bar{W}\bar{X}$	1	0	1	1
$\bar{W}X$	0	1	0	1
$W\bar{X}$	0	0	0	0
$WX$	1	1	0	0

$$d = \bar{W}\bar{X}\bar{Z} + \bar{W}\bar{X}Y + W\bar{X}\bar{Y} + \bar{W}X\bar{Y}Z + \bar{W}Y\bar{Z}$$

f)

$W \backslash YZ$	$\bar{Y}\bar{Z}$	$\bar{Y}Z$	$YZ$	$Y\bar{Z}$
$\bar{W}\bar{X}$	1	0	0	0
$\bar{W}X$	1	1	0	1
$W\bar{X}$	0	0	0	0
$WX$	1	1	0	0

$$f = \bar{W}X\bar{Y} + \bar{W}X\bar{Z} + W\bar{X}\bar{Y} + X\bar{Y}\bar{Z}$$

g)

$W \backslash YZ$	$\bar{Y}\bar{Z}$	$\bar{Y}Z$	$YZ$	$Y\bar{Z}$
$\bar{W}\bar{X}$	0	0	1	1
$\bar{W}X$	1	1	0	1
$W\bar{X}$	1	1	1	1
$WX$	1	1	1	1

$$g = W + X\bar{Y} + Y\bar{Z} + \bar{X}Y$$

e. Menggambar sirkuit K-Map

