

QUIZ 4

2. $a \cdot (b+c)$

3.

	ab	00	01	11	10
c	0			A	B
1			D	C	

$f(a,b,c)$

E) None of A-D

4.

	ab	00	01	11	10
c	0	1	1	1	1
1		0	0	1	1

$g(a,b,c)$

% Correct

96%

74%

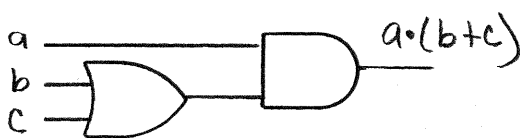
65%

68%

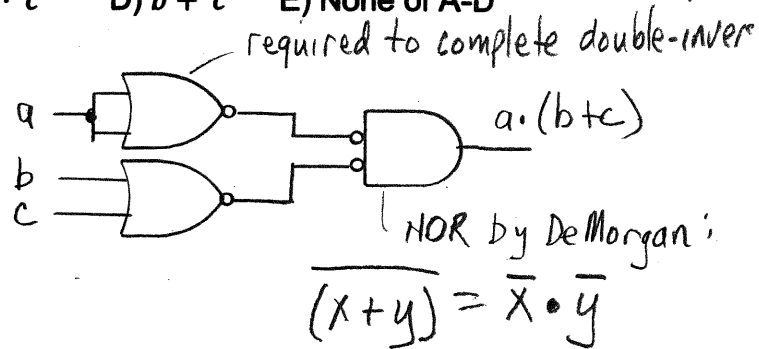
Quiz 4 (2/20/2020)

- What does the K in K-map stand for?
A) Kutcher B) Knightley C) Kingsley **D) Karnaugh** E) Kostner
- How many NOR gates are required for a NOR synthesis of the function shown? Include any NOR gates that implement NOT.
A) 1 B) 2 **C) 3** D) 4 E) None of A-D
- Which is the proper location of the *minterm* m_6 on the K-map shown for function $f(a,b,c)$? (Answers on displayed slide) **Answer is A**
- What is the minimum-cost SoP synthesis for the function $g(a,b,c)$ whose K-map is shown on the displayed slide?
A) $a + \bar{c}$ B) $a \cdot c + \bar{c}$ C) $a + \bar{a} \cdot \bar{c}$ D) $b + \bar{c}$ E) None of A-D

2.



$\Rightarrow$



3. Minterm numbering starts with 0. m_6 corresponds to $a \cdot b \cdot \bar{c}$. Minterm position on K-map shown below.

	ab	00	01	11	10
c	0	m_0	m_2	m_6	m_4
1		m_1	m_3	m_7	m_5

4. There are 2 4-groups in the K-map, as shown above. The right half 4-group reduces to a , and the top 4 group reduces to $\bar{c}$. These 2 terms include all 1's in K-map, so, $g = a + \bar{c}$