Practice Quiz 5

Closed Book and Notes – No Calculators Allowed

The following K-map applies to the questions on this quiz:

	X′		X	
Z′	1	0	d	d
Z	0	0	1	1
	Y′		Y	Y′

1. The **cost** of a **minimal sum of products** realization of this function (assuming **both true and complemented variables** are available) would be:

   (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

2. The **cost** of a **minimal product of sums** realization of this function (assuming **both true and complemented variables** are available) would be:

   (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

3. Assuming the availability of **only true** input variables, the **fewest number of 2-input NAND gates** that are needed to realize this function is:

   (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

4. Assuming the availability of **only true** input variables, the **fewest number of 2-input NOR gates** that are needed to realize this function is:

   (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

5. Assuming the availability of **only true** input variables, the **fewest number of 2-input open-drain NAND gates** that are needed to realize this function is:

   (A) 1 (B) 2 (C) 3 (D) 4 (E) 5