Question 1. [8 MARKS]

Consider the following relations and constraints.

Relations	Integrity Constraints
W(a, b, c)	**X**[e] $\subseteq$ **Y**[f]
X(d, e)	**Z**[j] $\subseteq$ **Y**[f]
Y(f, g, h)	
Z(j, k, l)	

Part (a) [6 MARKS]

Assume there are 10 tuples in **X**. How many tuples could there be in **Y**? Circle the most precise answer.

a) 0 or more b) 1 or more c) 10 or more d) Between 0 and 10, inclusive

Solution: c

Assume there are 10 tuples in **Y**. How many tuples could there be in **X**? Circle the most precise answer.

a) 0 or more b) 1 or more c) 10 or more d) Between 0 and 10, inclusive

Solution: d

Assume there are 10 tuples in **Z**. How many tuples could there be in **Y**? Circle the most precise answer.

a) 0 or more b) 1 or more c) 10 or more d) Between 0 and 10, inclusive

Solution: b

Assume there are 10 tuples in **Y**. How many tuples could there be in **Z**? Circle the most precise answer.