Student Name: $\qquad$
UTor ID: $\qquad$

## Quiz 9. Choosing order of joins

Below are the vital statistics for four relations, $\mathrm{W}, \mathrm{X}, \mathrm{Y}$, and Z :
Relations:
$W(a, b), X(b, c), Y(c, d), Z(d, a)$
Statistics:
$T(W)=100 \quad T(X)=200 \quad T\{Y)=300 \quad T(Z)=400$
$\mathrm{V}(\mathrm{W}, \mathrm{a})=20 \quad \mathrm{~V}(\mathrm{X}, \mathrm{b})=50 \quad \mathrm{~V}(\mathrm{Y}, \mathrm{c})=50 \quad \mathrm{~V}(\mathrm{Z}, \mathrm{d})=40$
$\begin{array}{llll}\mathrm{V}\{\mathrm{W}, \mathrm{b})=60 & \mathrm{~F}(\mathrm{X}, \mathrm{c})=100 \quad \mathrm{~V}(\mathrm{Y}, \mathrm{d})=50 & \mathrm{~V}(\mathrm{Z}, \mathrm{a})=100\end{array}$
Give the dynamic-programming table entries that evaluates all possible join orders allowing Left-deep trees only. (Use the back of the page if needed).

What is the best choice?

The best order is:

