

### Q3

1/1 point (ungraded)

Consider tables  $R(A,B)$  and  $S(B,C)$  and a query  $Q = \text{select } A,C \text{ from } R,S \text{ where } R.B=S.B \text{ and } A < 10 \text{ and } C > 20$ . Which of the following materialized views can NOT be used to help evaluate  $Q$ ?

- ☐ V1 = select A,C from R,S where R.B=S.B
- ☒ V2 = select A,C from R,S where A < 10 and C > 20
- ☐ V3 = select A,R.B,S.B,C from R,S where A < 10 and C > 20
- ☐ V4 = select \* from R where A < 10

#### Explanation

$Q$  can be evaluated on V1 or V3 by applying selection conditions.  $Q$  can be evaluated by joining V4 with S. V2 does not have enough information to enforce  $R.B=S.B$ .