

Task 1:

- a) $\pi \text{ SID } (\sigma \text{ Class} = 1 \text{ or Class} = 2 ((\text{Courses} \bowtie \text{Gradebook}) \bowtie \text{Students}))$
- b) $\pi \text{ SID } (\sigma (\text{Class} = 1) \text{ or (Surname} = \text{"Valdez"}) (\text{Students} \bowtie (\text{Courses} \bowtie \text{Gradebook})))$
- c) $\pi \text{ SID } (\sigma \text{ Class} = 1 \text{ and Class} = 2 ((\text{Courses} \bowtie \text{Gradebook}) \bowtie \text{Students}))$
- d) $\pi \text{ SID } ((\text{Students} \bowtie \text{Gradebook}) \wedge (\text{Courses}))$
- e) $\pi \text{ SID } (\sigma \text{ Class} = 3 (\text{Courses} \bowtie (\text{Gradebook} \wedge (\text{Courses}))))$
- f) $\{(SID1, SID2) \mid SID1 \neq SID2 \text{ and exists CID } (SID1, CID, A) \wedge (SID2, CID, B) \wedge A > B\}$
- g) $\pi \text{ CID } (\sigma \text{ count (SID)} \geq 2 (\text{Gradebook}) \text{group by CID})$

Task 2:

A)

SID	Name
1	Warren

B)

SID	Name
1	Warren

C) there is no student who meets these conditions, so the result would be an empty set.

D) there is no student who meets these conditions, so the result would be an empty set.