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Task 1:

- a) π Name(π SID((σ Class=1 V Class=2 Courses) \bowtie Gradebook) \bowtie Students)
- b) $(\pi SID((\sigma Class=1 Courses) \bowtie Gradebook)) \cup (\pi SID(\sigma Surname='Valdez' Students))$
- c) $\pi SID(\pi CID(\sigma Class=1 Courses) \bowtie Gradebook) \cap \pi SID(\pi CID(\sigma Class=2 Courses) \bowtie Gradebook)$
- d) $(\pi SID, CID Gradebook) / (\pi CID Courses)$
- e) $(\pi SID, CID Gradebook) / (\pi CID (\sigma Class=3 Courses))$
- f) $\pi A.SID$, B.SID(ρA (Gradebook) \bowtie (A.SID \neq B.SID \land A.Mark < B.Mark) ρB (Gradebook))
- g) ρ Gradebook(π A.CID(ρ A(Gradebook) \bowtie (A.CID = B.CID \land A.SID \neq B.SID) ρ B(Gradebook)))

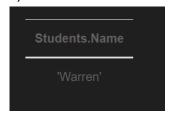
Alternative task view:

```
1 πName(πSID((σClass=1 v Class=2 Courses) M Gradebook) M Students)
2 (πSID((σClass=1 Courses) M Gradebook)) ∪ (πSID(σSurname='Valdez' Students))
3 πSID(πCID(σClass=1 Courses) M Gradebook) ∩ πSID(πCID(σClass=2 Courses) M Gradebook)
4 (πSID, CID Gradebook) / (πCID Courses)
5 (πSID, CID Gradebook) / (πCID (σClass=3 Courses))
6 πA.SID, B.SID(ρA(Gradebook) M (A.SID ≠ B.SID ∧ A.Mark < B.Mark) ρB(Gradebook))
7 ρGradebook(πA.CID(ρA(Gradebook) M (A.CID = B.CID ∧ A.SID ≠ B.SID) ρB(Gradebook)))</pre>
```

Task 2:

Students.Name
"Warren'

b)



c)



d)

