Q1:

π clientid, petid, petname, pettype (pets ᐅᐊ (σ clientid == cid and petid == pid and vetid == vid and visitdate != vd (visits \* (ρ clientid ➡ cid, petid ➡ pid, visitdate ➡ vd, vetid ➡ vid (visits)))))

Q2:

π vetid, vetname, vetcity (vets) - π vetid, vetname, vetcity (vets ᐅRIGHTᐊ (visitsᐅᐊpets))

Q3:

π visitdate (visits ᐅᐊ σ pettype == 'dog' (pets) ᐅᐊ σ vetname == 'who' (vets))

Q4:

π clientid, clientname (σ clientcity == 'houston' (clients))

Q5:

π clientid, clientname (π clientid (σ pettype == 'dog' (pets)) ᐅᐊ π clientid (σ pettype == 'cat' (pets)) ᐅᐊ clients)

Q6:

π clientid, clientname (σ vetcity != clientcity (vets ᐅᐊ visits ᐅᐊ clients))

Q7:

π clientid, clientname (σ vetname == 'spock' (ρ vetcity ➡ city (vets) ᐅᐊ ρ clientcity ➡ city (clients)))

Q8:

π petname (σ pettype == 'dog' or pettype == 'cat' (pets))