Assume the following relational schema and tables for Quiz 1 questions 2-5

Vehicle(VRN, Ma, Mo, Color) , Own(VRN, SSN) , Person (SSN, Name, Addr, Phone)

Vehicle

VRN	Ma	Mo	Color
123	Honda	Hawk	Red
234	Mazda	RX7	Blue
345	Ford	Taurus	Blue
456	Ford	Ranger	Green
567	Honda	Accord	Red
678	Mazda	RX7	Silver
789	VW	Bug	White
890	Suzuki	Intruder	Black
901	Harley	Sportster	Black
012	VW	Bug	Red

Own

VRN	SSN
123	bcd
234	abc
456	def
567	ghi
683	def
795	abc
901	bcd

Person

SSN	Name	Addr	Phone
abc	Dave	Birch	xxx
bcd	Mary	Grove	yyy
cde	Sriram	Oak	zzz
def	Fang	Birch	www
efg	Derek	Elm	uuu
fgh	Joan	Elm	vvv
ghi	Xie	Oak	sss
hij	Gilford	Birch	ttt

Quiz 1 Your Name: KEY **6 points total** page 1

Honor code statement and signature: I understand that for this quiz I may NOT consult with other students regarding the quiz questions, nor can I share the quiz Content before 8:00 AM Tuesday Jan 15 2013. I understand that I MAY consult the textbook, videos, course Web site, and your own notes, however. I understand that I can take NO LONGER than 15 minutes to complete the quiz from the time of download.

Your signature: _____

1. According to the course grading scheme, if you were to miss ALL of the course Meetings (plenary classes, study groups, and project team meetings with Doug), then the highest your total grade ***percentage*** could be

Answer: **75%** **1 pt** for this, all or nothing

Explain: **If all meetings are missed, the attendance percentage rises to 25% and 0% of that 25% will be received**

1 pt for something comparable, and 0.5pt for something not quantitative but qualitatively right , and 0 for anything else (probably 0 if they get the first part wrong)

2. Write a relational algebra query to return all rows (tuples) of Vehicle table in which Ma = 'Honda'

$\sigma_{Ma='Honda'}(Vehicle)$ **1 pt** for this (parentheses optional), all or nothing, but VERY simple syntax differences (missing '') ok

3. Write a relational algebra query to return only the VRN and Color of Vehicles with Ma = 'Honda'

$\pi_{VRN,Color}\sigma_{Ma='Honda'}(Vehicle)$ **1 pt** for this (parentheses optional), all or nothing, but VERY simple syntax differences (missing '') ok

4. Assume that Vehicle contains only the first two rows listed on the handout, and that Own only Contains the first two rows that are listed. Write the ***result*** of the relational algebra expression **Vehicle X Own ,** where **X** signifies the relational algebra cross product operator

Vehicle				Own	
VRN	Ma	Mo	Color	VRN	SSN
123	Honda	Hawk	Red	123	bcd
123	Honda	Hawk	Red	235	abc
235	Mazda	RX7	Blue	123	bcd
235	Mazda	RX7	Blue	235	abc

1 pt for this (order irrelevant, header optional), 0.5 for a suspected "typo", and other simple syntax differences (e.g., Vehicle.Color or V.Color) ok

5. Using **the full table of the handout** write the result of the query

$\pi_{Ma, SSN}(\sigma_{Color = 'Green'}(Vehicle \bowtie Own))$

1 pt for this (header optional), all or nothing

Ford	**def**