	cid character(4)	name text	city text	discount numeric(5,2)
1	c001	Tiptop	Duluth	10.00
2	c002	Tyrell	Dallas	12.00
3	c003	Allied	Dallas	8.00
4	c004	ACME	Duluth	8.50
5	c005	Weyland	Risa	0.00
6	c006	ACME	Kyoto	0.00

	aid character(3)	name text	city text	commissionpct numeric(5,2)
1	a01	Smith	New York	6.50
2	a02	Jones	Newark	6.00
3	a03	Perry	Tokyo	7.00
4	a04	Grey	New York	6.00
5	a05	Otasi	Duluth	5.00
6	a06	Smith	Dallas	5.00
7	a08	Bond	London	7.07

	pid character(3)	name text	city text	quantity integer	priceusd numeric(10,2)
1	p01	comb	Dallas	111400	0.50
2	p02	brush	Newark	203000	0.50
3	p03	razor	Duluth	150600	1.00
4	p04	pen	Duluth	125300	1.00
5	p05	pencil	Dallas	221400	1.00
6	p06	trapper	Dallas	123100	2.00
7	p07	case	Newark	100500	1.00
8	p08	eraser	Newark	200600	1.25

	ordnumber integer	month character(3)	cid character(4)	aid character(3)	pid character(3)	qty integer	totalusd numeric(12,2)
1	1011	Jan	c001	a01	p01	1000	450.00
2	1012	Jan	c002	a03	p03	1000	880.00
3	1015	Jan	c003	a03	p05	1200	1104.00
4	1016	Jan	c006	a01	p01	1000	500.00
5	1017	Feb	c001	a06	p03	600	540.00
6	1018	Feb	c001	a03	p04	600	540.00
7	1019	Feb	c001	a02	p02	400	180.00
8	1020	Feb	c006	a03	p07	600	600.00
9	1021	Feb	c004	a06	p01	1000	460.00
10	1022	Mar	c001	a05	p06	400	720.00
11	1023	Mar	c001	a04	p05	500	450.00
12	1024	Mar	c006	a06	p01	800	400.00
13	1025	Apr	c001	a05	p07	800	720.00
14	1026	May	c002	a05	p03	800	744.00

OK.

2. A superkey is a set of data which will uniquely identify every single row. There will not be any pieces of data that have all of the chosen aspects identical. A candidate key is a superkey that has the fewest number of columns for a given dataset. Lastly a primary key is what is chosen to uniquely identify each dataset.

3. All of the different basic data types that any standard programming language has are in sql (ints chars doubles). In addition SQL has some data types that work for more complex pieces

of data, such as a date field, and time fields. I could create a table for a stock trader and keep track of which sales he has made. I would have a Primary key as an ID, a date and time field for when the trade was executed. I would have how many shares as an int a boolean field to show if it was bought or sold, and a double field for what cost it was transacted at. Lastly it would have the stock symbol and what stock exchange it was traded at. I do not think that any of the rows can be nullable.

4. a. The “first normal form” rule: This says that multivalued attributes are not allowed. It is important because each intersection of a row and column will only have one piece of data. b. The “access rows by content only” rule: Says that you should only try to access content based on what it is. Asking for information like the 5th row or the 3rd table will not always return consistent results. c. The “all rows must be unique” rule: If there are two rows that are identical then they are redundant. This additional information is not needed and it can lead to inconsistencies errors.