

# Chart for Problem 1

	Eggleston	Friar	Gaucher	Hinnel	downtown	local store	shopping mall	group of stores	1 block	3 miles	5 miles	10 miles	bus	family car	jogging	neighbor's car	lumber	power mower	shorts	slacks	
Arthur																					
Bertha																					
Carlo																					
Donna																					
downtown																					
local store																					
shopping mall																					
group of stores																					
1 block																					
3 miles																					
5 miles																					
10 miles																					
bus																					
family car																					
jogging																					
neighbor's car																					
lumber																					
power mower																					
shorts																					
slacks																					

## 7. Father and Child

Five children (Sarah, Tammy, Udall, Vincent, **Walter**) and their fathers (Fritz, Gerhard, Homer, Ian, Jules) live in a row of houses (1, 2, 3, 4, 5). Each father has only one child and has the same last name as his child (Nelson, Orthman, Pierce, Quinlan, Roth). Each father has a different occupation (accountant, bricklayer, carpenter, detective, electrician), and each child is interested in a different occupation (karate teacher, locksmith, mystery writer, x-ray technician, zoo keeper).

From the facts below, find each child's first name, last name, father's first name, father's occupation, future occupation, and house position.

1. Homer's and Roth's sons are both straight-A students.
2. Udall lives two doors away from Ian's son and three doors away from Orthman.
3. Pierce's son and the future locksmith live next door to each other.
4. The father of the girl who wants to be a zoo keeper and the carpenter, who lives next door, often drive to work together.
5. The boys whose fathers' occupations do not require manual skill live on one end of the row.
6. The carpenter's house is after both Fritz's and the would-be locksmith's houses.
7. Mr. **Quinlan** and Homer and the carpenter were invited to go over to a party at Waiter's house.
8. Nelson and the daughters of Fritz and the electrician were all in the school play.
9. Gerhard's and **Quinlan's** houses are next door to Udall's house.
10. The girl who wants to be a mystery writer often goes over to the detective's house to talk to him about plots.
11. Sarah lives next door to Homer.
12. The future locksmith's house is before the accountant's house.
13. The future x-ray technician lives two doors away from Pierce.
14. The electrician and the future mystery writer's father belong to the same book club.
15. **Walter's** last name is not Roth.

# Chart for Problem 14

	Abbott	Baker	Carter	Drake	Edwards	Frasier	Grant	Homer	Irving	1st base	2nd base	3d base	shortstop	left field	center field	right field	pitcher	catcher	21	22	23	25	26	27	28	33	34	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	
José																																					
Kevin																																					
Lou																																					
Mike																																					
Neil																																					
Otis																																					
Paul																																					
Quincy																																					
Rick																																					
1st base																																					
2nd base																																					
3rd base																																					
shortstop																																					
left field																																					
center field																																					
right field																																					
pitcher																																					
catcher																																					
21																																					
22																																					
23																																					
25																																					
26																																					
27																																					
28																																					
33																																					
34																																					
1st																																					
2nd																																					
3rd																																					
4th																																					
5th																																					
6th																																					
7th																																					
8th																																					
9th																																					

Name	Married/Single
Abbott	
Baker	
Carter	
Drake	
Edwards	
Frasier	
Grant	
Homer	
Irving	

Horton bought a green van (8).

Then Joe’s roadster is not black (sedan), blue (Nancy), green (van), or red (Abby), so it is yellow, and so Joe is Baker (8).

The carpenter didn’t buy the roadster (2), so Joe is not the carpenter. Neither is he the executive (black car), the homemaker (7), or the salesperson (compact car). So Joe is the secretary.

Horton, who has the green van, is not Curly (7), Lefty (5), or Nicky (11), so Horton is Woody.

Nancy doesn’t have the compact (3), the sedan (black), or the van (green), so she has the station wagon. She is not the carpenter (9), the executive (sedan), or the salesperson (compact), so she is the homemaker.

Bruce is not the carpenter (2) or the salesperson (6, female), so he is the executive, who has the black sedan. Then Diane owns the green car, which is the van, so Diane is Horton, and her nickname is Woody.

This leaves the compact car for Abby, so she is the salesperson, which means Diane is the carpenter.

Eaton isn’t the salesperson or the homemaker (6), so Eaton is the executive, Bruce. Carlyle isn’t the homemaker (7), so Doyle is, and so Carlyle is the salesperson. Carlyle is not Lefty (10, salesperson) or Nicky (11, red car), so she is Curly.

Eaton knows the salesperson (6), so he is not Lefty (10). So Eaton is Nicky, and so Nancy is Lefty.

7.

CHILDREN	FATHER	FATHERS' OCCUPATION	HOUSE POSITION	CHILDS' INTEREST
Sarah Quinlan	Fritz	bricklayer	3	mystery writer
Tammy Orthman	Jules	electrician	5	zookeeper
Pierce	Homer	accountant	2	karate teacher
Vincent Roth	Ian	carpenter	4	x-ray technician
Walter Nelson	Gerhard	detective	1	locksmith

Since there are only two girls, the Nelson child is a boy (8), as is the Pierce child (3) and the Roth child (1). Then the Orthman and Quinlan children are girls.

The future mystery writer (10) and the future zookeeper (4) are girls, so the other children are boys. The Pierce boy’s interest is not in being a locksmith (3) or an x-ray technician (13), so he hopes to be a karate teacher.

Fritz, whose child is a girl (8), is not the accountant or the detective (5, boys), the carpenter (6), or the

electrician (8), so he is the bricklayer. Then the girls’ fathers are the bricklayer and the electrician (8), so the boys’ fathers are the accountant, the carpenter, and the detective. The would-be locksmith’s father is not the accountant (12) or the carpenter (6), so he is the detective.

All five houses are included in clues 9 and 2, although there isn’t enough information to identify the order; Orthman, Ian, Gerhard, Udall, Quinlan, with Udall living in either the second or the fourth house. Using the information we already have, we can relist these, including the information of whether a boy or a girl lives there:

Orthman (girl), Ian (boy), Gerhard, Udall (boy), Quinlan (girl).

Since the girls are accounted for, Gerhard’s child is a boy. Then we have

Orthman (girl), Ian (boy), Gerhard (boy), Udall (boy), Quinlan (girl).

Homer’s child is a boy (1), so Homer is Udall’s father. Then Jules is a girl’s father, so he is the electrician. His daughter is not the future mystery writer (14), so she is the future zookeeper, and Fritz’s daughter is the future mystery writer.

Roth’s son is not Udall (1, Homer) or Walter (15), so he is Vincent.

The carpenter’s house is at least the third house (6), and at least one of the other boys lives in a house before this house (6, locksmith). The boys whose fathers are the accountant and the detective both live on one end of the row (5), so this end has to be the left end. The future locksmith’s house is before the accountant’s house (12), so the accountant’s house is the second house, and the future locksmith’s house is the first.

As stated earlier, Udall lives in the second or the fourth house. If he lives in the fourth, then Orthman, a girl, lives in the first (2), a contradiction. So Udall lives in the second house, Ian lives in the fourth, and Orthman lives in the fifth (2).

Since Homer is Udall’s father, and since a boy lives in the first house, then Sarah lives on the other side of Udall—that is, in the third house (11). Orthman, a girl, lives in the fifth house and, since Sarah lives in the third house, Tammy lives in the fifth house.

Gerhard and Quinlan live on either side of Udall (9). A boy lives in the first house, and Quinlan is a girl, so Quinlan lives in the third house, and Gerhard lives in the first. Since the carpenter’s child is a boy, this makes Ian the carpenter.