Instructions: Please do your work on a separate sheet of paper. Your paper should be neat and easy-to-follow. Write out the important parts of the problem as well as your solution. Lists and tables should be drawn or typed large enough to be easily interpreted.

1. **College Applications**  Four high school friends (one is named **Cathy**) are about to go to college. Their last names are **Williams, Burbank, Collins, and Gunderson**. Each is enrolled in a different college (one is a **state** college). From the clues below, determine each person’s full name and the college he or she will attend.

   A) No student’s first name begins with the same first letter as his or her last name. No student’s first name ends with the same letter as the last letter of his or her last name.

   B) Neither **Hank** nor **Williams** is going to the **community college**.

   C) **Alan, Collins**, and the student who is going to the **university** all live on the same street. The other student lives two blocks away.

   D) **Gladys** and **Hank** live next door to each other.

   E) The **private college** accepted **Hank’s** application, but he decided he couldn’t afford to go there.

2. **Coast to Coast**  Four women live in different cities. One of the cities is San Francisco. Determine in which city each woman lives.

   A) Riana, the woman from Charleston, South Carolina, and the woman from Gainesville, Florida are not related.

   B) Wendy and the woman from Provo, Utah are cousins.

   C) Neither Phyllis nor Wendy is from the West Coast.

   D) Ann is from a coastal city.

3. **The Fishing Trip**  Several friends take a fishing trip every year. Each year they have a contest to see who catches the heaviest fish. The loser has to pay for all of the junk food they eat on the trip. Determine each friend’s standings in this year’s contest by using the following clues. By the way, in the tradition of fishing trips, every statement quoted here is a falsehood.

   **Marta**: Larry was first.

   **Sally**: Marta beat Woody.

   **Woody**: I beat Sally.

   **Larry**: Woody was second.
4. **Class Schedules**  The master schedule for River High School is shown below. The dots indicate the period(s) in which a class is offered. All students must take the classes marked with asterisks. The other classes are electives.

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a. Make up a schedule for Jill. She wants to take Band and History as her electives. She needs Lunch during fifth period because the science club meets then.

b. Make up a schedule for Tom. He wants to take Drama and Typing. He would like to have Lunch during fourth period, but he doesn’t care that much.

c. Make up a schedule for Leanne. She wants to take Band and Drama.

d. Make up a schedule for Mea. She wants to take History and Typing.

5. **Class Schedules (cont.)** Use the table above to answer the following questions.

a. Jose wants to take Drama and History. Make up his schedule.

b. Jose had his schedule all figured out, but when he went to sign up for first-period PE, he found out that the class was closed. However, the other two periods of PE were still open. What should he do?

c. After making a new schedule that he wasn’t too happy with, Jose found out that the school was opening a new sixth-period Science class. Now what should he do?

6. **Volleyball Team**  Three friends—Elaine, Kelly, and Shannon—all start for their college volleyball team. Each plays a different position: setter, middle blocker, and outside hitter. Of the three, one is a freshman, one a sophomore, and the other a junior. From the clues below, determine each woman’s position and year in school.

   A) Elaine is not the setter.
   B) Kelly has been in school longer than the middle blocker.
   C) The middle blocker has been in school longer than the outside hitter.
   D) Either Kelly is the setter or Elaine is the middle blocker.
7. **Music Preferences**  Two men (Jack and Mike) and two women (Adele and Edna) each like a different type of music (one likes jazz). Their last names are Mullin, Hardaway, Richmond, and Higgins. From the clues below, find each person’s full name and favorite type of music.

A) Hardaway hates country-western music.
B) The classical-music lover said she’d teach Higgins to play the piano.
C) Adele and Richmond knew the country-western fan in high school.
D) Jack and the man who likes rock music work in the same office building.
E) Richmond and Higgins are on the same bowling team. There are no men on their team.

8. **Suspects**  The police department arrested four suspects—one men and two women—on suspicion of petty theft. The sergeant on duty who processed the suspects was having a bit of a bad day. He produced this list of suspects and descriptions:

Robin Wilde: scar on left cheek
Cary Steele: purple hair
Pat Fleece: tall and blonde
Connie Theeves: birthmark on left wrist

When the list landed on the arresting detective’s desk, he was furious. He went to the sergeant and said, “Paul, you might be having a bad day, but this list is full of mistakes. The first and last names are all mismatched. And none of the descriptions matches either the first or the last name it is listed with. Do you think you can fix this?”

The sergeant replied, “Sorry, Dick. I am having a bad day. But I think I need a little bit more information.”

The detective answered, “Okay, Paul. Here’s some more info. Connie has purple hair to match her purple high tops. The men are Steele and Fleece. A woman has the scar. Do you think you can straighten this mess out now?”

The sergeant now determined the first and last names of each suspect, as well as their descriptions. You work it out, too.

9. **Anniversaries**  Three couples are good friends. At a dinner party one night, they discovered that their anniversaries were in different months: May, June, and July. They also discovered that they had each been married a different number of years: 11, 12, and 13. From the clues below, match up each husband (one is Pete) with each wife (one is Lorna), the month of their anniversary, and the number of years each couple has been married.

A) Jorge and his wife have three kids. Their anniversary is not in July. They have not been married as long as Tori and her husband have.
B) Nylia and her husband have four kids. Their anniversary is in June. They have been married longer than Justin and his wife.

10. **The Phone Number**  Ed met a new girl named Candy at the beginning of the year. He really liked her, so he wanted her phone number (landline). He knew the first three digits of the
number were 492 because the town was so small that everyone had the same telephone prefix. She wouldn’t give him the rest of the number at first, but he persisted. Finally, at the beginning of lunch, she handed him a piece of paper with several numbers on it.

“The last four digits of my phone number are on this page,” she explained.

3257  4682  8824  0626  4608
8624  4632  6428  8604  8428
8064  3195  8420  4218  8240
7915  6420  4602  2628  4178
3281  2804  4002  4826  0846
4718  4680  6402  0428  2406

Ed protested, “But there must be thirty numbers here.”
Candy laughed, “That’s right. But I’ll give you some clues. If you really want my number, you’ll figure it out.”

“Okay,” he said. “Shoot. I’m ready.”
Candy listed her clues:
1. All the digits are even.
2. All the digits are different.
3. The digit in the tens place is less than the other digits.
4. The sum of the two larger digits is 10 more than the sum of the two smaller digits.

During lunch, Ed frantically worked away and tried to figure out which number was Candy’s. He looked up with only a few minutes left in the lunch period. “I don’t have enough information,” he protested. The bell rang, so they walked out of the lunchroom together. She said, “Okay, I’ll tell you the sum of all the digits.” She whispered the information in his ear.

“Thanks!” Ed said, because this gave him enough information to figure out the number. “I’ll call you tonight.”

What was Candy’s phone number?