

**Problem 1:**

On Wednesday, May 5, 1976, the wicked Simon Legrew was murdered at his home in a Boston suburb. The police were able to place the time of death at between 11:10 and 11:30 PM. They arrested four suspects --- Jeeves, the butler; Fifi, the French maid; Julia, the cook; and Jessica, Mr Legrew's private secretary. Under questioning, the four suspects made the following statements:

Jeeves: I didn't do it. Jessica did it. Mr Legrew was blackmailing Jessica. Fifi and I were watching television together from 10:10 PM until 12:30 AM.

Fifi: I'm innocent. Jeeves and I were watching television together at the time of the murder. Jessica was being blackmailed. I saw Jessica speaking to Mr Legrew at 9:30 PM on the night of the murder.

Julia: I'm innocent. Jessica was being blackmailed. Jeeves murdered Mr Legrew. I saw Jessica leave the house at 10:00 PM.

Jessica: I did not kill Mr Legrew. I was not being blackmailed. I was in Chicago during the entire night of the murder. Fifi is the murderer.

Each of the four suspects made two true statements and told two lies.

Who killed Simon?

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**Problem 2:**

Three women (Abby, Janice, and Linda) and two men (Martin and Roberto) are a singer, a dancer, a comic, a television writer, and a theatrical agent, although not necessarily in that order.

Abby said: I'm not the comic. The writer and the dancer are happily married. The singer and the agent are engaged to be married.

Janice said: The singer is my cousin. The writer and the dancer are siblings. The comic and the agent share an apartment.

Linda said: I am not the writer. The singer and the agent hate each other. The dancer and the comic frequently work together.

Martin said: The singer owes me \$10. The writer and the dancer are not related, and have never met. The comic and the agent are next-door neighbors in an apartment house.

Roberto said: The singer saved my life once. The agent lives alone in an old mansion. The dancer and the comic have never met.

If the only certainty is that every statement in which an individual alludes to his or her own profession is true, who is who?

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**Problem 3:**

Probably the first real evidence of the existence of an Abominable Snowman is a photograph taken by the renowned mountaineer Sir Hilary Edmund and his party.

Before the photograph was developed, Sir Hilary was asked to describe the beast: "It was over 7 feet tall, with long white fur, and 6 toes on each foot", replied Edmund.

"He's a liar", objected famed Sherpa guide Nenzing Torkay, grinning. "The Snowman has no fur at all, is under 5 feet tall, and has hooves".

The other three members of the expedition also disagreed in their descriptions.

Monte Everisto said that the Snowman was 6 feet tall and had long white fur and hooves.

Matty Horne claimed the Snowman was over 7 feet tall, had brown fur, and had 5 toes on each foot.

And Snowsov "Killer" Manjaro estimated the beast's height at under 5 feet and attributed brown fur and 6-toed feet to the creature.

The discrepancies in the descriptions were probably due to the fact that the beast was sighted during a severe snowstorm. When the picture was developed, it proved that each of the five mountain climbers was correct about exactly one aspect of the Snowman's appearance.

What does an Abominable Snowman look like?

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**Problem 4:**

Three boys, Pedro, Quincy, and Ralph, and their sisters, Sandy, Trixie, and Vera (not necessarily in that order), had chickens for pets.

Last week was an unusual one. Each chicken laid as many eggs as its owner owned chickens. Quincy had three times as many chickens as his own sister, and had eight more chickens than Ralph's sister. Furthermore, by the end of the week, Quincy had collected 56 more eggs than Pedro; Ralph had collected 52 more than Sandy; and Pedro had collected as many eggs as Sandy and Trixie together.

How many chickens did each of the six people own? Who was whose sister?

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**Problem 5:**

A farmer, his son and daughter and their pets need to cross a river. The pets are a fierce dog, two hamsters, and two rabbits. There is a small two-seater boat that they can use. The boat can hold two people, or one person and a dog, one person and two hamsters, or one person and two rabbits. All three people can row the boat, but none of the animals can.

If the farmer is not around, the dog will bite everybody and everything.

If the son is not around, the daughter will tease the hamsters.

If the daughter is not around, the son will tease the rabbits.

The hamsters and the rabbits get along fine with each other.

How can everyone cross the river without any biting or teasing?

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**Problem 6:**

"I hear some children playing in the back yard", said Jones, a graduate student in mathematics. "Are they all yours?"

"Heavens, no", exclaimed Professor Smith, the eminent number theorist. "My children are playing with friends from three other families in the neighborhood, although our family happens to be the largest. The Browns have a smaller number of children, the Greens have a still smaller number, and the Blacks have the smallest of all".

"How many children are there altogether", asked Jones.

"Let me put it this way", said Smith. "There are fewer than 18 children, and the product of the numbers of children in the four families happens to be my house number, which you saw when you arrived".

Jones took a notebook and pencil from his pocket and started scribbling. A moment later he looked up and said, "I need more information. Is there more than one child in the Black family?"

As soon as Smith replied, Jones smiled and correctly stated the number of children in each family.

Knowing the house number and whether the Blacks had more than one child, Jones found the problem trivial. It is a remarkable fact, however, that the number of children in each family can be determined solely on the basis of the other information given above!

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**Problem 7:**

Five friends pooled their resources one day and pieced a CD together from songs they had written. They called their band Frozen Cabbage and ended up playing a number of live gigs at local events. Determine the full name of each band member, the instrument (or mixing console) each played, the brand of equipment each used, plus each member's favorite magazine (including *Home Recording*).

1. Steve wasn't the sound engineer. One of the women enjoyed *EQ* magazine.
  2. Angie and Steve didn't like *Recording* magazine. The bass player used Ibanez equipment.
  3. Mr. Magnus didn't use Mackie equipment. Mark's last name wasn't Hydal and he didn't play keyboard.
  4. The sound engineer, whose last name wasn't Engel, enjoyed reading *Mix* magazine. The person who used Yamaha drums wasn't Robert, but their last name is Hydal.
  5. The five band members (in no particular order) were: Mark Scott, the female bass player, the person who read *Musician*, the one who used Peavey equipment, and Robert.
  6. Shelley's last name was not Hydal or McArthur and she didn't use Roland equipment. Mackie only developed equipment for live sound and recording NOT musical instruments.
  7. Steve McArthur was the guitarist.
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