

*The queen of Hearts, she made some tarts
all on a summer's day
The Knave of Hearts, he stole the tarts
and took them quite away! ... Old Nursery Rhyme*

The first tale :”How about making us some nice tarts?” The King of Hearts asked the Queen of Hearts one cool summer day.

“What’s the sense of making tarts without jam?” said the Queen furiously. “The jam is the best part!”

“Then use jam,” said the King.

“I can’t!” shouted the Queen. “My jam has been stolen!”

“Really!” said the King. “This is quite serious! Who stole it?”

“How do you expect me to know who stole it? If I knew, I would have had it back long ago and the miscreant’s head in the bargain!”

Well, the King had his soldiers scout around for the missing jam, and it was found in the house of the March Hare, the Mad Hatter, and the Dormouse. All three were promptly arrested and tried.

“Now, now!” exclaimed the King at the trial. “I want to get to the bottom of this! I don’t like people coming into my kitchen and stealing my jam!”

“Why not?” asked one of the guinea pigs.

“Suppress that guinea pig!” shouted the Queen. The guinea pig was promptly suppressed. (Those who have read Alice’s Adventures in Wonderland will recall the meaning of the word suppress: The officers of the court put the guinea pig into a canvas bag, which tied up at the mouth with strings, and sat upon it.)

“Now then, said the king, after the commotion of suppressing the guinea pig had died down, “I want to get to the bottom of this!”

“You’ve already said that, “ remarked a second guinea pig. (This guinea pig was also promptly suppressed.)

“Did you by any chance steal the jam?” the king asked the March Hare.

“I never stole the jam!” pleaded the March Hare. (At this point all the remaining guinea pigs cheered, and were all promptly suppressed.)

“What about you?” the King roared to the Hatter, who was trembling like a leaf. “Are you by any chance the culprit?”

The Hatter was unable to utter a word; he just stood there gasping and sipping his tea.

“If he has nothing to say that only proves his guilt”, said the Queen, “so off with his head immediately!”

“No, no!” pleaded the Hatter. “One of us stole it, but it wasn’t me!”

“Make a note of that!” said the King to the jury. “This evidence might turn out to be quite important!”

“And what about you?” continued the King to the Dormouse. “What do you have to say about all this? Did the March Hare and the Hatter both tell the truth?”

“At least one of them did,” replied the Dormouse, who then fell asleep for the rest of the trial.

As subsequent investigation revealed, the March Hare and the Dormouse were not both speaking the truth.

Who stole the jam?

THE SECOND TALE: “Now we have the jam back,” said the king, “so you can make us some tarts.”

“How can I make tarts without flour?” asked the Queen.

“You mean the flour was stolen?” cried the King.

“Yes?” said the Queen. “Find the miscreant, and take his head off!”

“Now, now,” said the King, “let’s not be hasty!”

Still, the flour had to be found. Sure enough, it was found in the home of the March Hare, the Mad Hatter, and the Dormouse, so these three were promptly arrested and tried.

At the trial, the March Hare claimed that the Hatter stole it. The Hatter and the Dormouse also made statements, but for some reason the statements were not recorded, so I cannot tell you what they were. Anyhow, as it turned out, only one of the three had stolen the flour, and he was only one of the three who told the truth.

Who stole the flour?

THE THIRD TALE: “Well, here is your flour,” said the King happily, “so now you can make the tarts.”

“Make tarts without pepper?” asked the Queen.

“Pepper!” said the King incredulously. “You mean you use pepper in your tarts?”

“Not much,” replied the Queen.

“And I suppose it was stolen!”

“Of course!” said the Queen. “Find the pepper, and when you have found out who stole it, then off with his —”

“Now, now!” said the King.

Well the pepper had to be found, of course. Now, as you all know, people who steal pepper never tell the truth.

“What?” said Alice (not the Alice in Wonderland, but the Alice of this party). “I never heard that before!”

“You haven’t?” I said in mock surprise.

“Of course not! What’s more, I don’t believe anybody else has either! Have any of you heard that before?”

The children all shook their heads negatively.

“Well,” I said, “for purposes of this story, let’s assume that people who steal pepper never tell the truth.”

“All right,” said Alice, a bit hesitantly.

So, to continue the story, the most obvious suspect was the Duchess’s cook. At the trial she made but one statement: “I know who stole the pepper!”

Assuming that people who steal pepper always lie, is the cook guilty or innocent?

SO WHO STOLE THE PEPPER? Well, the King’s next suspects were the March Hare, the Mad Hatter, and the Dormouse. Soldiers were sent to their house, but no pepper was found. Still, they might be hiding it somewhere, so they were arrested on general principles.

At the trial the March Hare claimed that the Hatter was innocent and the Hatter claimed that the Dormouse was innocent. The Dormouse mumbled some statement in his sleep, but it was not recorded.

As it turned out, no innocent one made a false statement and (we recall) people who steal pepper never make true statements. Also, the pepper was stolen by only one creature. Which, if any of the three, is guilty?

THE FOURTH TALE “That certainly cost me a lot of work finding the pepper,” said the King angrily, “and I doubt that the tarts will be all that much the better for it! Pepper indeed!” continued the King. “Why don’t you use blotting paper while you’re at it?” he added sarcastically.

“I do,” replied the Queen, “but not much.”

“Very funny!” said the King. “Anyway, now you have your pepper back, so will you please make me the tarts?”

“Without sugar?” said the Queen.

“What’s the matter, isn’t the jam sweet enough?” asked the King impatiently.

“I need sugar for the dough, and my sugar has been stolen!”

“Oh, not again!” said the King wearily. “These tarts will never get made!”

Well, recovering the sugar turned out to be a relatively simple affair. The sugar was found in the house of the Duchess, and as events proved, it was stolen by either the Duchess or the Cook, but not both. They made the following statements at the trial:

Duchess: The cook did not steal the sugar.

Cook: The Duchess stole the sugar.

The one who stole the sugar was lying. (It is not given whether the other one lied or told the truth.)

Which one stole the sugar? Also, was the other one lying or telling the truth.

THE FIFTH TALE “Well,” said the King, “here is your sugar, so you can make me the tarts.”

“Without salt?” asked the Queen.

So! The salt had also been stolen! Well, this time it was found that the culprit was either the Caterpillar, Bill the Lizard, or the Cheshire Cat. (One of them had come into the kitchen and eaten up all the salt; the container wasn’t missing.) The three were tried and made the following statements in court:

Caterpillar: Bill the Lizard ate the salt.

Bill the Lizard: That is true!

Cheshire Cat: I never ate the salt!

As it happened, at least one of them lied and at least one told the truth Who stole the salt?

THE SIXTH TALE “Here is some more salt, so now you can make the tarts,” said the King.

“Can’t,” said the Queen. “Somebody stole my baking pan.”

“Baking pan!” shouted the king. “Well, of course we’ll have to get that back!”

This time the search was narrowed down to the Frog-Footman, the Fish-Footman, and the Knave of Hearts. They made the following statements at the trial:

Frog-Footman: It was stolen by the Fish-Footman.

Fish-Footman: Your Majesty, I never stole it!

Knave of Hearts: I stole it!

“A fine help you are!” shouted the King to the Knave. “You usually lie through your teeth!”

Well, as it happened, at most one of them lied. Who stole the baking pan?

THE SEVENTH TALE “Here is the baking pan,” said the King, “so now you can make me the tarts.”

“Without a recipe?” inquired the Queen.

“Use your usual recipe,” cried the King impatiently, “last time your tarts were delicious!”

“Can’t,” said the Queen. “The recipe is in my cookbook, and the cookbook has just been stolen!”

Well, the most likely suspect was the Duchess’s Cook, and the cookbook was indeed found in the Duchess’s kitchen. The only possible suspects were the Cook, the Duchess, and the Cheshire Cat.

“The Cheshire Cat stole it!” said the Duchess at the trial.

“Oh, yes, I stole it!” said the Cheshire Cat with a grin.

“I didn’t steal it!” said the Cook.

As it turned out, the thief had lied and at least one of the others had told the truth.

Who stole the cookbook?

THE SEVENTH TALE (CONTINUED) Shortly after the cookbook was returned to the Queen, it was stolen a second time—again by either the Duchess, the Cook, or the Cheshire Cat.

At the trial they made exactly the same statements as at the last trial. Only this time, the thief lied and the other two either both lied or both told the truth.

Who stole the cookbook this time?

THE EIGHTH TALE: “Well, here is your cookbook back again,” said the King, “so you now have the recipe. So make me the tarts!”

“Without milk, butter, or eggs?”

“Oh, me!” cried the King. “This is too much!”

“And this time I know it was the March Hare, the Mad Hatter, and the Dormouse,” shouted the Queen, stamping her feet in rage. “I actually saw them sneaking out of the window when I came into the Kitchen. Each was carrying something, but I couldn’t tell who was carrying what.”

“We’ll soon settle that!” roared the King.

Well, the ingredients were all found at the house of the March Hare, Mad Hatter, and Dormouse. The three were tried and made the following statements at the trial.

March Hare: The Hatter stole the butter.

Hatter: The Dormouse stole the eggs.

Dormouse: I stole the milk.

As it happened, the one who stole the butter told the truth and the one who stole the eggs lied. Who stole what?

THE FINAL TALE: “Well, here is your butter, eggs, and milk all back,” said the King, “and I see you have your jam, flour, sugar, salt, baking Pan, and cookbook—even your pepper. Now you can surely make me the tarts!”

Well, the Queen made a marvelous batch of tarts. “These are even better than last time,” said the Queen to herself. “I’m sure the king will be delighted!”

The Queen went up to the Royal Chamber to announce to the King that the Tarts were ready. Arm in arm they went down together to the kitchen, but when they got there, they found the table empty—The whole platter of tarts was clean gone!

“Now this has gone too far!” cried the King, paling with rage.

“Who sneaks into my house like this? I’ve half a mind to really the culprit!”

Well, needless to say, the culprit did not really get executed, but he was caught, and the tarts were fully recovered. That ends my story.

“What do you mean, that ends your story?” asked (the real) Alice excitedly. “You haven’t told us who stole the tarts, nor whether there was a trial, and if there was, what happened at the trial-you haven’t told us anything!”

“Well, there was a trial,” I added, “but it was a very complicated one, and for you to figure out who was guilty involves solving a complicated logic puzzle, so I think I’ll wait a few years until you’re all grown up, and then I’ll tell you what happened.”

“No, we want to know what happened!” said Tony.

“I’ll let you know what happened,” I replied, “but in a few more years when you’re all grown up.”

“No, no, we want to know now!” they all shouted.

“All right,” I replied, “but you won’t blame me if I give you a very complicated logic puzzle?”

“We won’t blame you-really we won’t. Only stop keeping us in suspense- tell us what happened!”

So I continued-

Well, as I said, the trial was quite a complicated one. The first suspect was the Knave of Hearts, but circumstantial evidence was brought forth which established beyond any reasonable doubt that the Knave of Hearts couldn’t have stolen the tarts. The next suspect was the Dormouse. However, several reliable witnesses testified that the Dormouse was fast asleep at the time of the robbery, hence it couldn’t have been the Dormouse. At this point the trial came to a dead standstill.

Suddenly the door of the courtroom burst open, and the White Rabbit proudly entered, bearing the tray of tarts. Behind him came the soldiers, dragging in the Gryphon and the Mock Turtle in chains.

“The tarts were found on the beach,” explained the White Rabbit.

“The Gryphon and the Mock Turtle were just about to eat them when the soldiers happened to come by and put them in custody.”

“That proves their guilt without any question of doubt,” shouted the Queen, “so off with their heads immediately!”

“Now, now,” said the King, “we must give them a fair trial, you know!”

Well, events happened which proved that the Gryphon and the Mock Turtle were not both guilty-question that remained were whether either one was guilty, and if so which one; or whether someone else was guilty: Was it a mere coincidence that the tarts were found by the Gryphon and the Mock Turtle? No; evidence was soon produced that conclusively proved that either the Gryphon or the Mock Turtle was guilty (but not both), but the court could see no way to decide which one it was. It seemed that no further progress could be made, but quite suddenly a whole medley of witnesses came up, making various statements.

“The Gryphon never stole the tarts,” said the Duchess.

“But he has stolen other things in the past,” said the Cook.

“The Mock Turtle has stolen things in the past,” said the Cheshire Cat.

“The Cheshire Cat has stolen things in the past,” said the Caterpillar.

“The Cook and the Cheshire Cat are both right,” said the March Hare.

“The Cook and the Caterpillar are both right,” said the Dormouse.

“Either the Cheshire Cat or the Caterpillar is right- and maybe both,” said the Hatter.

“Either the March Hare or the Dormouse is right- and maybe both,” said Bill the Lizard.

“The Cook and the Hatter are both right,” said the Knave of Hearts.

“Bill the Lizard is right and the Knave of Hearts is wrong,” said the White Rabbit.

There was a silence.

“All this proves nothing!” roared the King. “Just words, words, words- all useless words!”

“Not so useless, your Majesty,” said Alice, rising from the jury. “It so happens that the White Rabbit and the Duchess made statements which are either both true or both false.”

All eyes turned eagerly to Alice. Now, everyone knew that Alice makes only true statements, and subsequent investigation showed that this statement was no exception. Moreover, this statement solved the entire mystery.

Who stole the tarts?

WHO IS MAD? Shortly after the trial, Alice met the Duchess, and they had the following remarkable conversation.

“The Cheshire Cat says that everyone here is mad,” said Alice. “Is that really true?”

“Of course not,” replied the Duchess. “If that were really true, then the Cat would also be mad, hence you could not rely on what it said.”

This sounded perfectly logical to Alice.

“But I’ll tell you a great secret, my dear,” continued the Duchess.

“Half the creatures around here are mad- totally mad!”

“That doesn’t surprise me,” said Alice, “many have seemed quite mad to me!”

“When I said totally mad,” continued the Duchess, quite ignoring Alice’s remark, “I meant exactly what I said: They are completely deluded! All their beliefs are wrong- not just some, but all.

Everything true they believe to be false and everything false they believe to be true.”

Alice thought awhile about this very queer state of affairs. “Does a mad person or creature believe that two plus two equals five?” asked Alice.

“Why, of course,” replied the Duchess, “since it doesn’t, then the mad one believe it does.”

“And does a mad person also believe that two plus two equals six?”

“Of course,” replied the Duchess, “since it doesn’t, then the mad one believe it does.”

“But it can’t both equal five and six!” exclaimed Alice.

“Of course not,” agreed the Duchess, “you know that and I know that, but a mad person doesn’t. And the moral of that is__”

“What about the sane people around here?” interrupted Alice (who had heard quite enough morals for the day).

“I guess most of their beliefs are right but some of them are wrong?”

“Oh, no, no!” said the Duchess most emphatically. “That may be true where you come from, but around here the sane people are one hundred percent accurate in their beliefs! Everything true they know to be true and everything false they know to be false.”

Alice thought this over. “Which ones around here are sane and which ones are mad?” asked Alice. “I would very much like to know this.”

THE CATERPILLAR AND THE LIZARD “Well,” replied the Duchess, “take, for example, the Caterpillar and Bill the Lizard. The Caterpillar believes that both of them are mad.”

“Which of them is really mad?” asked Alice.

“I shouldn’t have to tell you that!” replied the Duchess. “I have given you enough information for you to deduce the answer.”

What is the solution? Is the Caterpillar mad or sane? And what about the Lizard?

THE KING AND QUEEN OF DIAMONDS “Then there’s the King and Queen of Diamonds,” began the Duchess.

“The King and Queen of Diamonds?” said Alice. “I don’t believe I’ve met them—in fact I did not know they were around here.”

“All the cards are around here,” said the Duchess. “Anyway, I heard a rumor that the Queen of Diamonds was mad. However, I was not sure whether the person who told me this was mad or sane, so I decided to find out for myself.

“Well, one day I met the King of Diamonds without his Queen. I knew him to be absolutely honest, though of doubtful sanity, hence whatever he would say he would at least believe to be true.

“Is your poor dear wife really mad?” I asked sympathetically.”

“She believe she is,’ replied the King.”

What can be deduced about the King and Queen of Diamonds?

WHAT ABOUT THESE THREE? “I’ve always wondered about the March Hare, the Hatter, and the Dormouse,” said Alice.. “The Hatter is called the Mad Hatter, but is he really mad? And what about the March Hare and the Dormouse?”

“Well”, replied the Duchess, “the Hatter once expressed the belief that the March Hare does not believe that all three of them are sane. Also, the Dormouse believes that the March Hare is sane.”

What can you deduce about these three?

AND THESE THREE? “Then there’s the Gryphon, the Mock Turtle, and the Lobster,” the Duchess began.

“I didn’t know there was a real lobster, around here,” replied Alice. “I only know him in a poem.”

“Oh, yes, there is a real lobster, and he is as big as the Mock Turtle,” replied the Duchess. “Anyway, the Lobster once expressed the belief that the Gryphon believes that exactly one of the three is sane. The Mock Turtle believes that the Gryphon is sane.”

What can you deduce about these three?

AND NOW, WHAT ABOUT THESE TWO? “You know,” said Alice in a very low voice, looking around to see that the Queen of Hearts was not within hearing distance, “I am particularly interested in knowing about the Queen of Hearts. What are they?”

“Ah,” said the Duchess, “this is an interesting story indeed! The Queen believes that the Queen is mad.”

“Now that’s too much!” cried Alice. “I think I’ll go mad if I try to puzzle that one out!”

“Very well,” said the Duchess good-naturedly, “let’s try an easier one first. For example, take the King and Queen of Spades.”

There was a long pause.

“What about the King and Queen of Spades?” asked Alice.

“Well, the Queen believes that the King believes that she is mad.

What can you tell me about the King and Queen of Spades?”

THE KING AND QUEEN OF CLUBS “You got that one pretty easily,” said the Duchess. “Now, what would you say if I told you that the King of Clubs believes that the Queen of Clubs believes that the Queen of Clubs is mad?”

THE KING'S STORY Of all the puzzle-adventure in Wonderland, those that now follow are the ones Alice liked best. Not till her later journey thought the Looking-Glass did Alice come across such remarkable examples of logical reasoning.

"Well, all my life I've been interested in logic and law. And I was thinking about some remarkable cases I read in a book-oh, ever so long ago! It is a very old book-I don't think I've seen it since I was a boy. I lost the book a long time ago, but I remember the cases as clearly as if it were yesterday!"

"This sounds interesting!" said Alice.

"The most interesting part was the last chapter," continued the King. "I was all about trials of secret agents-sometimes known as spies. The chapter started out with some very simple cases and ended up with the best puzzle I've ever heard in my life!"

"Now, I declare," said the King quite angrily, "you should never say you know those puzzles until you have heard what the puzzles are! There are countless puzzles about liars and truth-tellers, child, and the odds are a million to one you don't know these puzzles!"

"You remind me," continued the King, still vividly agitated, "of those children who when they see a magician take out a pack of cards, about to entertain them with some conjuring tricks, say "I know that trick!" Why, there are countless tricks which can be done with a pack of cards-just as there are countless puzzles that can be told about knights who always tell the truth and knaves who always lie. The book was old and extremely rare even in my early days, and million to one against your knowing any of these puzzles."

I wonder where the King go those exact odds, thought Alice. Still, she was a little ashamed of her hastiness and decided not to interrupt the King again any more than necessary.

ENTER THE FIRST SPY "Now, then," said the King, "as I said, the knights of this land always told the truth-they never lied-and the knaves of this land always lied-they never told the truth. One day there was great excitement in the land, because it was known that a spy had entered from another land."

"How was it known?" asked Alice, quite forgetting her resolution.

"I have no idea," replied the King, "and it happened to be most irrelevant to the problem!"

"Did the spy lie or tell the truth?" asked Alice.

"Ah, that's what complicated matters!" replied the King. "The spy was neither a knight nor a knave; he sometimes told the truth and sometimes lied-he always did what most suited his convenience.

"It was known that the spy was living with two other inhabitants and that one of them was knight and the other a knave. The officers arrested all three one day but didn't know which one was the knight, which one was the knave, and which one was the spy. Let us call these three A, B, and C.

"At the interrogation, A claimed that C was a Knave, and B claimed that A was a knight. Then C was asked what he was, and C replied, 'I am the spy.'"

Which one was the spy, which one was the knight, and which one was the knave?

THE CASE OF THE BUNGLING SPY "That wasn't too difficult," said Alice, after she had solved the problem.

"They get more difficult later on," replied the King. "The book was well written and slowly progressed from the more easy to the more difficult. The next two puzzles are also rather easy-still, they make one think.

"Well, the spy was sent to prison, but soon after, another spy entered the land. The officers mad an arrest one day, but they weren't sure whether their man was a spy or not. Actually, the man was a spy, but the officers didn't

know it. The spy was brought in for questioning and was asked to make a statement. He then made a false statement, but it was a very stupid thing for him to have done, because it immediately convicted him."

Can you supply such a statement?

ANOTHER BUNGLING SPY "The spy was sent to prison, of course," said the King, "but then another spy entered the land. They officers arrested him, but were not sure whether he was a spy. This time the spy made a true statement, but was again very foolish in having done so, for the statement convicted him."

Can you supply such a statement?

THE CASE OF THE FOXY SPY "The next spy who entered the land," said the King, "was far more clever! He was arrested one day together with two others, one of whom was a knight and the other a knave. The case was brought to trial. The court knew that one was a knight, one a knave, and the other a spy (who sometimes lies and sometime tells the truth), but the court didn't know who was which. Again, we will call the three defendants A, B, and C.

"First A said, 'I am not a spy.' Then B said, 'I am a spy.' Then C was asked, 'Is B really a spy?'

"Now, it so happened that C was the spy. Being a spy, he can either lie or tell the truth as he chooses. Well, he did the foxiest thing possible and answered in such a way as not to convict himself."

What did he answer?

WHO IS MURDOCH? "Another spy by the name of Murdoch entered the land. He is one of A, B, C, and one of the three is a knight and the other a knave. The spy is the only one of the three named Murdoch. The three made the following statements in court:

A: My name is Murdoch.

B: That is true.

C: I am Murdoch.

Which one is the spy?

THE RETURN OF MURDOCH "Well," continued the King, "Murdoch was sent to prison, but soon after, he escaped and fled the land. He then came back well disguised, so no one could recognize him. Again, he was arrested in the company of a knight and a knave, and the three-called them A, B, C-made the following statements at the trial:

A: My name is Murdoch.

B: That is true.

C: I am not Murdoch.

Which one is Murdoch this time?

A MORE INTERESTING CASE "And now, we come to the more interesting cases," said the King.

Alice was all ears.

"Well," began the King, "in trial we again have the three defendants-A, B, C. The court knew that one was a knight, one a knave, and the other the spy, but it was not known who was which. First A accused B of being the spy; then B accused C of being the spy; and then C pointed to one of the other two defendants and said, 'He is

really the spy!' The judge then convicted the spy. Which one did he convict?"

"Now, just a minute," cried Alice. "You don't expect me to solve this without your telling me which one C pointed to, do you?"

"When I read this case in the book," replied the King, "I also thought that not enough information was given to solve it. But when I thought a bit more deeply about it, I realized there was. Yes, enough information has been given to determine the solution."

Which one was the spy?

A STILL MORE INTERESTING CASE "And now, we come to a more interesting case yet," said the King. "Again we have three defendants-A, B, and C. The court knew that one was a knight, one a knave, and one the spy, but it was not know who was which. First the judge asked A, 'Are you the spy?' A answered (yes or no). Then the judge asked B, 'Did A tell the truth?' B answered (again either yes or no)

"At this point, A said, 'C is not the spy.' The judge replied, 'I already knew that. And now I know who the spy is!'

"Who was the spy?"

"Now, just a minute!" cried Alice. "This time you haven't told me what either A or B said!:

"I know," replied the King. "The book didn't tell us that either, but the interesting thing is that it is possible to identify the spy without being told either of those things."

Alice continued to look puzzled.

"You realize," said the King, :that when the judge said the he already knew that C was not the spy, it was purely on the basis of the answers given by A and B."

What is the solution?

AN EQUALLY INTERESTING CASE "in this equally interesting case," continued the King, "the court again knew of the three defendants A, B, C, that one was a knight, one a Knave, and one a spy.

"The judge said, 'I shall ask a series of questions-all answers must be yes or no. If, at any point, I have identified the spy, I shall convict him, and the case will be terminated. If, at any point, I know of any of you that he is definitely not the spy, then I shall acquit him before proceeding further.'

"The judge then asked A, 'Are you the spy?' A answered. The judge then asked B, 'Did A tell the truth?' B answered. The judge thought for a while and then asked C, 'are you the spy?' C answered, and the judge made a conviction. Who was the spy?"

"Now, just a minute!" exclaimed Alice excitedly. "Do you realize that you haven't told me one single thing that any of the defendants said?"

"True," replied the King, "but the problem is solvable, nevertheless."

What is the solution?

THE MOST INTERESTING CASE OF ALL "And now, we come to the prize problem," said the King. "A certain Mr. Anthony attended a spy trial in which at the out set the court knew of the three defendants, A, B, C, that one of them was a knight, one a knave and one a spy. The judge first asked A, 'Are you a spy?' A answered yes or no. Then B was asked, 'Did A tell the truth?' B answered yes or no, and the judge then pointed to one of the three defendants and said, 'You are not the spy, so you may leave the court.' The man gladly did this. The judge then asked one of the two remaining defendants whether the other one was a spy. The defendant answered yes or no, and the judge then knew who the spy was.

"Now," continued the King, "it is not yet possible for you to know who the spy was-there is more to come. Well, Mr. Anthony told this case to a friend who was a barrister. The friend worked on the problem awhile and said, 'I don't have enough information to solve this case. Could you at least tell me whether the judge got the same answer to all three questions?' Mr. Anthony told him. It is not given whether or not the friend was then able to solve the problem.

"Then Mr. Anthony told the same problem to a second friend who was also a barrister. The second friend wanted to know whether or not the judge got at least two no answers. Mr. Anthony told him. Whether or not the second friend was able to solve the problem is not given.

"What is given," continued the King, "is that either both friends solved the problem, or neither solved the problem, but were are not told which.

"And now," concluded the King, "your problem is, Who was the spy?"

"It is really possible to solve this?" cried Alice in amazement.

"Yes," replied the King, "I can solemnly assure you it is!"

"It is really possible to solve this?" cried Alice in amazement (not the Alice in Wonderland, but the Alice of the party at which I was telling the story).

"Yes," I replied, "I can assure you it is."

"How come you don't solemnly assure us like the King?" asked Tony.

"Well," I replied with a laugh, "I'm, not a king, you know."

"Anyhow," I continued, "the puzzle really does have a solution, though it takes a good deal of thought to get it; it is more subtle than any other puzzle I have yet given you. This is a puzzle I will leave with you, and when I get back to town, we can discuss it further."

"You are going away?" asked Tony.