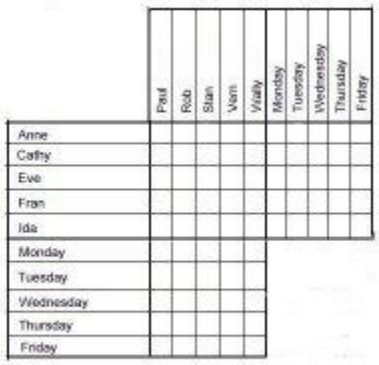
Holiday Logic Problems

Guide to Solving Logic Problems

Guide to Solving Logic Problems (3 Pages)

Solving logic problems is fun as well as challenging. All the information you need to solve the problem is given in the introduction, clues and any illustrations, which are provided. If you've never solved a logic problem before, this sample should help you get on your way to an enjoyable past-time. A dot or bullet is used to signify "Yes" and an "X" to signify "No".



Sample Logic Problem

1. **Anne's anniversary was on Monday, but she did not celebrate it with Wally.**
2. **Stan celebrated his anniversary on Wednesday. Rob celebrated his on Friday, but not with Ida.**
3. **Vern (who is married to Fran) celebrated his anniversary the day after Eve.**

Chart 1

	Paul	Rob	Stan	Vern	Wally	Monday	Tuesday	Wednesday	Thursday	Friday
Anne		X	X		X	•	X	X	X	X
Cathy						X				
Eve						X				
Fran						X				
Ida		X				X				X
Monday		X	X							
Tuesday		X	X							
Wednesday	X	X	•	X	X					
Thursday		X	X							
Friday	X	•	X	X	X					

Explanation

Anne celebrated her anniversary on Mon. (1) so put in a "." at the intersection of Anne and Monday. Put "x"s in all the other days in Anne's row and all the other names in the Mon. column. (Whenever you establish a relationship such as this, be sure to place "x"s at the intersections of all relationships that become impossible as a result.) Anne wasn't married to Wally (1), so put an "x" at the intersection of Anne and Wally. Stan's anniversary was on Wednesday (2), so put a "." at the intersection of Stan and Wednesday (don't forget the "x"s). Stan wasn't married to Anne who celebrated her anniversary on Mon., so put an "x" at the intersection of Anne and Stan. Rob celebrated his anniversary on Friday, but not with Ida (2), so put a "." at the intersection of Rob and

Friday, and "x"s at the intersections of Rob and Ida and Ida and Friday. Rob was also not married to Anne who celebrated her anniversary on Monday, so put an "x" at the intersection of Anne and Rob. Now your chart should look like chart 1.

Chart 2

	Paul	Rob	Stan	Vern	Wally	Monday	Tuesday	Wednesday	Thursday	Friday
Anne	.	x	x	x	x	.	x	x	x	x
Cathy	x			x		x		x	x	
Eve	x			x		x	x	.	x	x
Fran	x	x	x	.	x	x	x	x	.	x
Ida	x	x		x		x		x	x	x
Monday	.	x	x	x	x					
Tuesday	x	x	x	x						
Wednesday	x	x	.	x	x					
Thursday	x	x	x	.	x					
Friday	x	.	x	x	x					

Vern was married to Fran (3), so put a "." at the intersection of Vern and Fran. This leaves Anne's only possible husband as Paul, so put a "." at the intersection of Anne and Paul and Paul and Mon. Vern and Fran's anniversary took place the day after Eve's (3), which wasn't Monday (Anne), so Vern's wasn't Tuesday. It must have been Thursday (see chart), so Eve's was Wednesday (3). Put "."s at the intersections of Vern and Thursday, Fran and Thursday and Eve and Wednesday. Now your chart should look like chart 2.

Chart and dialogue continued on next page

The chart shows that Cathy celebrated her anniversary on Friday and that Ida celebrated hers on Tuesday. Wally celebrated his anniversary on Tuesday so Ida was married to Wally. As Cathy celebrated her anniversary on Friday, her husband was Rob. After this information is filled in, Eve could only have been married to Stan. You've completed the puzzle, and your chart should now look like chart 3.

Chart 3

	Paul	Rob	Stan	Vern	Wally	Monday	Tuesday	Wednesday	Thursday	Friday
Anne	•	X	X	X	X	•	X	X	X	X
Cathy	X	•	X	X	X	X	X	X	X	•
Eve	X	X	•	X	X	X	X	•	X	X
Fran	X	X	X	•	X	X	X	X	•	X
Ida	X	X	X	X	•	X	•	X	X	X
Monday	•	X	X	X	X					
Tuesday	X	X	X	X	•					
Wednesday	X	X	•	X	X					
Thursday	X	X	X	•	X					
Friday	X	•	X	X	X					

In summary: Anne and Paul, Monday; Cathy and Rob, Friday; Eve and Stan, Wednesday; Fran and Vern, Thursday; and Ida and Wally, Tuesday.

In some problems, it may be necessary to make a "logical" guess based on facts you've established. When you do, always look for clues or other facts that disprove it. If you find that your guess is incorrect, eliminate it as a possibility.

Christmas Bazaar Bake Sale

The White Plains Ladies League decided that they would sell cookies at this year's Christmas Bazaar which was held annually the second weekend in December. Each of the club's members chose a different type of cookie and baked them on a different day of the week. From the information provided below, determine what cookie each member made as well as the day on which she baked them.

1. **Ginny made her cookies at some point before Cheryl, but at some point after the one who made the Chewy Noels. Millie made her cookies at some point before Cathy.**
2. **The Gingerbread cookies were made before, but not the day before, the Butter cookies.**
3. **The M&M cookies were made on Monday. Anne baked her cookies on Friday.**

	TYPE OF COOKIE					DAY BAKED				
	SUGAR	BUTTER	M&M	GINGERBREAD	CHEWY NOELS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
CHERYL										
ANNE										
GINNY										
MILLIE										
CATHY										
DAY BAKED: MONDAY										
DAY BAKED: TUESDAY										
DAY BAKED: WEDNESDAY										
DAY BAKED: THURSDAY										
DAY BAKED: FRIDAY										

Deck the Halls

Five friends decided to decorate their Christmas trees using one main color and one accent color. Using the information provided below, Determine what colors of ornaments each woman used on her tree.

1. **Vicky's tree has no Blue on it.**
2. **Millie did not use Silver as her accent color.**
3. **Terry used Green ornaments on her tree.**
4. **Olivia's tree has White ornaments, but not Gold ones.**
5. **One tree's main color is Blue and its accent color is Silver.**
6. **Vicky's tree and Candy's tree have one color in common. Vicky's tree is not the one with the Cream ornaments (which is not the tree on which Gold is the main color).**

		MAIN COLOR					ACCENT COLOR				
		BLUE	SILVER	GREEN	RED	GOLD	WHITE	BLUE	CREAM	SILVER	RED
	CANDY										
	MILLIE										
	OLIVIA										
	TERRY										
	VICKY										
ACCENT COLOR	WHITE										
	BLUE										
	CREAM										
	SILVER										
	RED										

Holiday Concert (Page 1 of 2)

On Thursday evening, proud family members crowded into the community center to hear Erica and four other young musicians perform solos during the annual holiday concert. Each child showed great skill on a different instrument and performed a different piece. In attendance was each child's instructor (one of whom is Ms. Raymond), each of whom teaches at a different music school. From the information provided, determine the instrument each child played, the piece that he or she performed, his/her instructor and the music school each attended.

1. **The child who played the flute is either the one who performed "Frosty" or the Old Town student, or both. The child who performed "O Christmas Tree" is either Mr. Anderson's student or the one who played the piano, or both.**
2. **The three female instructors taught Ann, the violinist, and the child who performed Ave Maria". The two male teachers are the one who taught the guitarist and the Turtle Harbor instructor.**
3. **Harland and Nick are the ones who performed "Silent Night" and the Ivy Street student, in some order.**
4. **The harpist and the pianist are Ms. Diamond's student and the child who performed "Hark the Herald Angels", in some order. The guitarist and the violinist are Harland and Ms. Garcia's student, in some order.**
5. **Mr. Franklin is either the one who taught Jessie or the Capstone instructor or both. The whom who teaches at Mercury isn't the woman who instructed the child who performed "O Christmas Tree".**

Holiday Concert (Page 2 of 2)

	Instrument					Piece					Instructor					School				
	Harp	Flute	Guitar	Piano	Violin	O Christmas Tree	Hark the Herald Angels	Ave Maria	Frosty	Silent Night	Mr. Anderson	Ms. Diamond	Mr. Franklin	Ms. Garcia	Ms. Raymond	Capstone	Ivy Street	Mercury	Old Town	Turtle Harbor
Ann																				
Erica																				
Harland																				
Jessie																				
Nick																				
Capstone																				
Ivy Street																				
Mercury																				
Old Town																				
Turtle Harbor																				
Mr. Anderson																				
Ms. Diamond																				
Mr. Franklin																				
Ms. Garcia																				
Ms. Raymond																				
O Christmas Tree																				
Hark the Herald Angels																				
Ave Maria																				
Frosty																				
Silent Night																				

Resolutions, Anyone?

Susan and four of her friends were invited to the same New Year's eve party. During the course of the evening, they began talking about the new year's resolutions they were planning to make. From the information provided below, Match the first and last name of each of the friends and the resolution they were planning for the new year.

1. **The one surnamed Blake (who isn't Greg) resolved to quit smoking. Andrea (who isn't the one surnamed Mitchell) vowed to exercise.**
2. **Barbara Finch isn't the one who resolved to take a class.**
3. **Susan (who isn't the one surnamed Caruso nor the one surnamed Mitchell) vowed to start saving.**

	CARUSO	BARKER	FINCH	MITCHELL	BLAKE	LOSE WEIGHT	EXERCISE	STOP SMOKING	START SAVING	TAKE A CLASS
SUSAN										
JIM										
BARBARA										
ANDREA										
GREG										
LOSE WEIGHT										
EXERCISE										
STOP SMOKING										
START SAVING										
TAKE A CLASS										

Christmas Shopping

Lucy took the opportunity one Saturday early in December to do her Christmas shopping. She purchased five gifts each at a different store, none of which she visited at the same time (as if one really could...lol). From the information provided, determine the order in which she made her purchases and the gift she bought at each store.

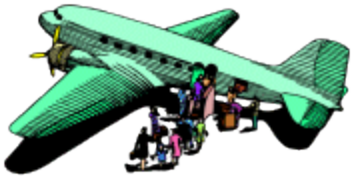
1. **Three of the stores Lucy visited were the Shoe Store (which she didn't visit second), the one she visited first, and the one where she bought the bookends. Lucy bought the purse at her last stop.**

2. **The perfume (which wasn't bought at Lucy's first stop) wasn't the gift she bought at the Five and Dime. The crystal vase wasn't the item she bought at the bookstore nor the gift bought at the Five and Dime.**

3. **The bookends weren't purchased at Lucy's second stop. The scarf wasn't found at Lucy's first stop. Lucy's fourth stop (which wasn't where she found the bookends) was at the pharmacy. The Five and Dime wasn't Lucy's third stop.**

	STORE					GIFT				
	DEPT STORE	BOOKSTORE	PHARMACY	FIVE & DIME	SHOE STORE	PURSE	PERFUME	CRYSTAL VASE	BOOKENDS	SCARF
FIRST										
SECOND										
THIRD										
FOURTH										
FIFTH										
PURSE										
PERFUME										
CRYSTAL VASE										
BOOKENDS										
SCARF										

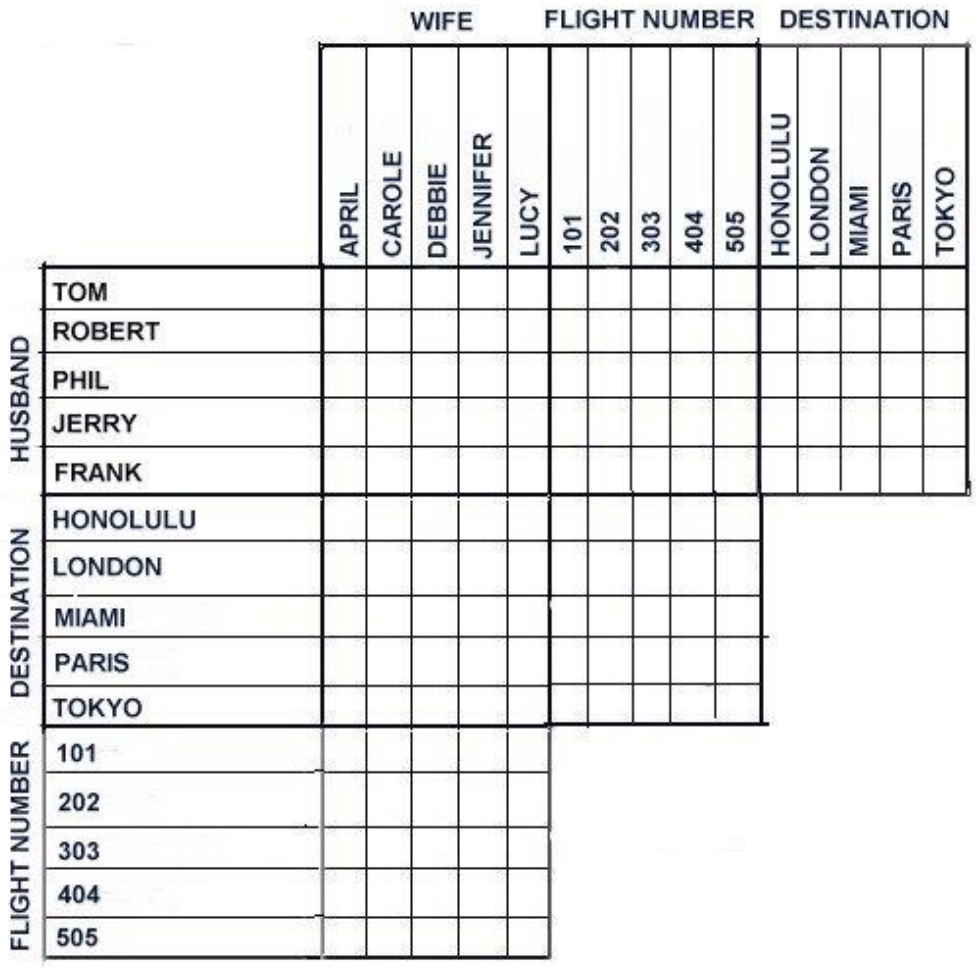
Christmas Vacation (Page 1 of 2)



Harold and his wife went to the airport to catch a flight for their Christmas holiday vacation. As they were waiting, they began conversations with four other couples who chose to spend the holidays traveling as opposed to staying at home. From the clues below, can you determine the husband and wife who make up each couple, their flight number and destination?

1. **Tom and his wife, Lucy, who aren't on the highest-numbered flight, are not the couple who was traveling to Tokyo nor the couple going to London.**
2. **The couple on flight 505, who isn't Frank and his wife, are going to Honolulu.**
3. **Carole's flight number is lower than April's.**
4. **Phil and his wife are taking flight 404.**
5. **April is not traveling to Honolulu or Tokyo.**
6. **Debbie and her husband are traveling to Paris. Their flight number is exactly 202 lower than that of Jerry and his wife (who aren't on flight 505).**

Christmas Vacation (Page 1 of 2)



Puzzle Solutions

Answers to Logic Problems (Page 1 of 2)

Christmas Bazaar Bake Sale

Cheryl, Sugar, Thursday
Millie, M&M, Monday
Cathy, Chewy Noels, Tuesday
Anne, Butter, Friday
Ginny, Gingerbread, Wednesday

Deck the Halls

Candy, Blue, Silver
Millie, Gold, Blue
Olivia, Red, White
Terry, Green, Cream
Vicky, Silver, Red

Holiday Concert

Ann, Piano, O Christmas Tree, Ms. Diamond, Capstone
Erica, Flute, Ave Maria, Ms. Raymond, Old Town
Harland, Guitar, Frosty, Mr. Anderson, Ivy Street
Jessie, Harp, Hark the Herald Angels, Mr. Franklin, Turtle Harbor
Nick, Violin, Silent Night, Ms. Garcia, Mercury

Christmas Shopping

First, Department Store, Crystal Vase
Second, Five & Dime, Scarf
Third, Bookstore, Bookends
Fourth, Pharmacy, Perfume
Fifth, Shoe Store, Purse

Resolutions, Anyone?

Susan, Barker, Start Saving
Jim, Blake, Stop Smoking
Barbara, Finch, Lose Weight
Andrea, Caruso, Exercise
Greg, Mitchell, Take a Class

Answers to Logic Problems (Page 2 of 2)

Christmas Vacation

Tom, Lucy, 202, Miami
Robert, Jennifer, 505, Honolulu
Phil, April, 404, London
Jerry, Carole, 303, Tokyo
Frank, Debbie, 101, Paris