

DIFFERENT STROKES

LOGIC PROBLEM

Last Saturday afternoon, the Foreston community recreation center held a swim meet in which over a hundred students from area high schools competed in various events. After the competition, the tired swimmers piled into the center’s cafeteria for a pizza party. Five friends (including Tom) sitting at the same table observed that they had each chosen a different variety of pizza (one chose deluxe). As they chatted, they also learned that, while each had participated in only one race that afternoon, none of them had participated in the same event (one swam in the relay race), and that each had finished in a different place (from highest to lowest, first through fifth) in his or her event. In fact, it looked like the only thing they had in common was a love of swimming—and pizza! From the information provided, can you match each swimmer with his or her event, place of finish, and variety of pizza?

1. Harry finished his race in a lower place than the swimmer who ate mushroom pizza, who finished exactly two places lower than the one who did the backstroke.
2. The freestyle swimmer, who finished fourth, did not order a cheese pizza.
3. The swimmer who did the butterfly (who didn’t finish last) finished exactly one place below Amanda. Joy finished lower than at least one other swimmer.
4. The swimmer who ate cheese pizza finished exactly two places lower than the swimmer who ate pepperoni pizza (who did not finish first in his or her race).
5. The swimmer who did the breaststroke finished in a higher place than the one who ate onion pizza, who finished exactly one place higher than Helen.

		EVENT					FINISH					PIZZA				
		BACKSTROKE	BREASTSTROKE	BUTTERFLY	FREESTYLE	RELAY	FIRST	SECOND	THIRD	FOURTH	FIFTH	CHEESE	DELUXE	MUSHROOM	ONION	PEPPERONI
SWIMMER	AMANDA															
	HARRY															
	HELEN															
	JOY															
	TOM															
PIZZA	CHEESE															
	DELUXE															
	MUSHROOM															
	ONION															
	PEPPERONI															
FINISH	FIRST															
	SECOND															
	THIRD															
	FOURTH															
	FIFTH															

Solving instructions and solution on the following pages

HOW TO SOLVE LOGIC PROBLEMS

Solving Logic Problems is entertaining and challenging. All the information you need to solve a Logic Problem is given in the introduction and clues, and in illustrations, when provided. If you've never solved a Logic Problem before, our sample should help you get started. Fill in the Sample Solving Chart as you follow our explanation. We use a "•" to signify "Yes" and an "X" to signify "No."

SAMPLE LOGIC PROBLEM

Five couples were married last week, each on a different weekday. From the information provided, determine the woman (one is Cathy) and man (one is Paul) who make up each couple, as well as the day on which each couple was married.

- Anne was married on Monday, but not to Wally.
- Stan's wedding was on Wednesday. Rob was married on Friday, but not to Ida.
- Vern (who married Fran) was married the day after Eve.

EXPLANATION

Anne was married Mon. (1), so put a "•" at the intersection of Anne and Mon. 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, as we did here, 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 wedding was Wed. (2), so put a "•" at the intersection of Stan and Wed. (don't forget the "X"s). Stan didn't marry Anne, who was married Mon., so put an "X" at the intersection of Anne and Stan. Rob was married Fri., but not to Ida (2), so put a "•" at the intersection of Rob and Fri., and "X"s at the intersections of Rob and Ida and Ida and Fri. Rob also didn't marry Anne, who was married Mon., so put an "X" at the intersection of Anne and Rob. Now your chart should look like chart 1.

Vern married 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 wedding was the day after Eve's (3), which wasn't Mon. [Anne], so Vern's wasn't Tue. It must have been Thu. [see chart], so Eve's was Wed. (3). Put "•"s at the intersections of Vern and Thu., Fran and Thu., and Eve and Wed. Now your chart should look like chart 2.

The chart shows that Cathy was married Fri., Ida was married Tue., and Wally was married Tue. Ida married Wally, and Cathy's wedding was Fri., so she married Rob. After this information is filled in, Eve could only have married Stan. You've completed the puzzle, and your chart should now look like chart 3.

In summary: Anne and Paul, Mon.; Cathy and Rob, Fri.; Eve and Stan, Wed.; Fran and Vern, Thu.; Ida and Wally, Tue.

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.

The solution for each problem is provided and contains an explanation of the puzzle, as well as a summary of the answer.

Welcome to the world of Logic Problems, where many hours of puzzle pleasure await you!

SAMPLE SOLVING CHART:

	PAUL	ROB	STAN	VERN	WALLY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
ANNE										
CATHY										
EVE										
FRAN										
IDA										
MONDAY										
TUESDAY										
WEDNESDAY										
THURSDAY										
FRIDAY										

1

	PAUL	ROB	STAN	VERN	WALLY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
ANNE		X	X		X	•	X	X	X	X
CATHY										
EVE						X	X			
FRAN										
IDA		X			X	X				X
MONDAY		X	X							
TUESDAY		X	X							
WEDNESDAY	X	X	•	X	X					
THURSDAY	X	X	X		X					
FRIDAY	X	•	X	X	X					

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	X	X
EVE	X					X	•	X	X	X
FRAN	X	X	X	•	X	X	X	X	•	X
IDA	X	X	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					

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					

**LOGIC PROBLEM
SOLUTION**

Cheese isn't 4th [freestyle (2)] (2), 1st, 2nd, or 3rd (4); it's 5th, so pepperoni's 3rd (4). Mushroom isn't 1st or 2nd (1); it's 4th, so Harry's 5th [last], and backstroke's 2nd (1). Onion isn't 1st (5); it's 2nd, so breaststroke's 1st, and Helen's 3rd (5). Deluxe is 1st. 5th [last] isn't butterfly (3); it's relay. 3rd's butterfly, so Amanda's 2nd (3). Joy isn't 1st (3); she's 4th. Tom's 1st.

In summary:

Amanda, backstroke, 2nd, onion

Harry, relay, 5th, cheese

Helen, butterfly, 3rd, pepperoni

Joy, freestyle, 4th, mushroom

Tom, breaststroke, 1st, deluxe