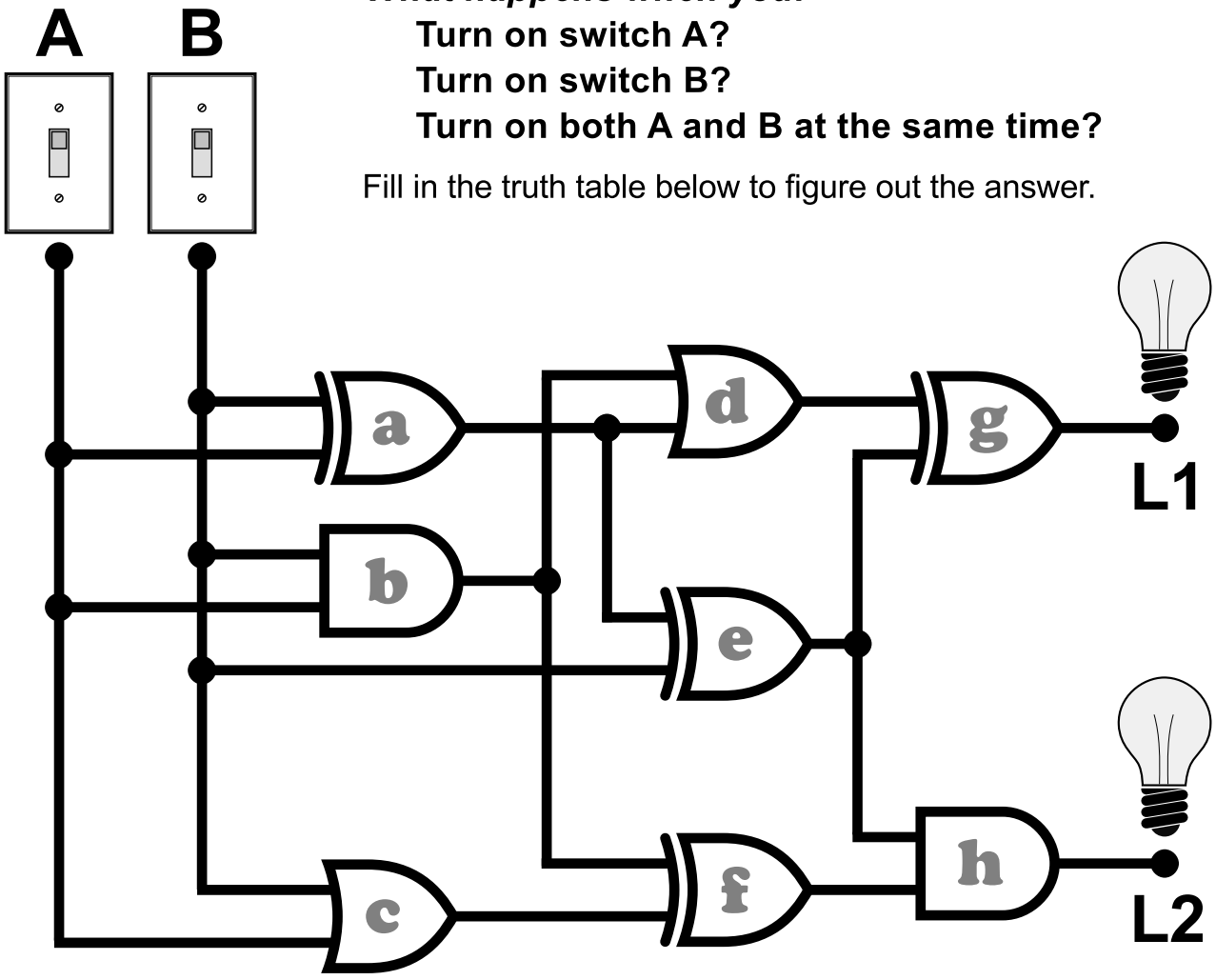
Name **Answer Key** Date _____

Lighten Up

You have two switches (**A** and **B**) and two lights (**L1** and **L2**). Both switches are initially off (and both lights are off).



What happens when you:

Turn on switch A?

Turn on switch B?

Turn on both A and B at the same time?

Fill in the truth table below to figure out the answer.

	Switches		*Logic gates*								*Lights*		
	A	**B**	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**L1**	**L2**	
Both A & B off	0	0	0	0	0	0	0	0	0	0	0	0	Both lights off
Only B on	0	1	1	0	1	1	0	1	1	0	1	0	B turns on L1
Only A on	1	0	1	0	1	1	1	1	0	1	0	1	A turns on L2
Both A & B on	1	1	0	1	1	1	1	0	0	0	0	0	Both switches on = both lights off