

Name _____

Truth Table Challenge Problem

Let m represent “Caleb goes to the movies.”

Let g represent “Caleb goes to the game.”

Let h represent “Caleb’s sister has the house to herself.”

Sentences:

“If Caleb goes to the movies or to the game, then Caleb’s sister has the house to herself.”

“If Caleb does not go to the movies and does not go to the game, then Caleb’s sister does not have the house to herself.”

m	g	h							

Name _____

Truth Table Challenge Problem Answer Key

Let m represent “Caleb goes to the movies.”

Let g represent “Caleb goes to the game.”

Let h represent “Caleb’s sister has the house to herself.”

Sentences:

“If Caleb goes to the movies or to the game, then Caleb’s sister has the house to herself.”

“If Caleb does not go to the movies and does not go to the game, then Caleb’s sister does not have the house to herself.”

m	g	h	$\sim m$	$\sim g$	$\sim h$	$m \vee g$	$(m \vee g) \rightarrow h$	$\sim m \wedge \sim g$	$(\sim m \wedge \sim g) \rightarrow \sim h$
T	T	T	F	F	F	T	T	F	T
T	T	F	F	F	T	T	F	F	T
T	F	T	F	T	F	T	T	F	T
T	F	F	F	T	T	T	F	F	T
F	T	T	T	F	F	T	T	F	T
F	T	F	T	F	T	T	F	F	T
F	F	T	T	T	F	F	T	T	F
F	F	F	T	T	T	F	T	T	T