

# Exercise

E – Earthquake,

B – Burglary

S – Sound of alarm heard

W – Dr. Watson Calls

G – Mrs Gibbons Calls

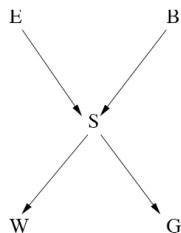
P(E)	e	-e
	1/10	9/10

P(B)	b	-b
	1/10	9/10

P(S E,B)	s	-s
$e \wedge b$	9/10	1/10
$e \wedge -b$	2/10	8/10
$-e \wedge b$	8/10	2/10
$-e \wedge -b$	0	1

P(W S)	w	-w
s	8/10	2/10
-s	2/10	8/10

P(G S)	g	-g
s	1/2	1/2
-s	0	1



- ▶ What is  $P(G|W)$ ? (i.e., the four probability values  $P(g|w)$ ,  $P(-g|w)$ ,  $P(g|-w)$ , and  $P(-g|-w)$ ).
- ▶ Query variable is G.
- ▶ First run of VE, evidence is  $W = w$ .
- ▶ Second run of VE, evidence is  $W = -w$ .
- ▶ Use same ordering for both runs of VE: E, B, S, G.