Group Quiz: Election 2000
Source: http://www.cnn.com/ELECTION/2000/results/index.epolls.html

CNN conducted exit polls during the 2000 Presidential election. Voters were asked (1) *Who did you vote for?* and (2) *What is your race/ethnicity?*. Results available at cnn.com reveal:

a) 54% of white voters (W) voted for George W. Bush (B)
b) 41% of Asian voters (A) voted for Bush (B)
c) 35% of Hispanic voters (H) voted for Bush (B)
d) 9% of African-American (Af) voted for Bush (B)
e) 39% of other races (O) voted for Bush (B)

Suppose that one of the voters interviewed by CNN is selected at random.

1) Explain why we cannot simply average these five percentages to find the percentage of all voters who voted for Bush. What would you need to know in order to find the total percent of voters who voted for Bush?

2) Translate the five percentages into probability statements:

.54 = P(___ | ___)   .41 = P(___ | ___)   .35 = P(___ | ___)   .09 = P(___ | ___)   .39 = P(___ | ___)

3) The CNN exit poll results further revealed that 80% of those polled were white, 10% were African-American, 7% Hispanic, 2% Asian, and 1% other races. Record these as (unconditional) probabilities in the bottom row of the following table:

	White (W)	Asian (A)	Hispanic (H)	African-Amer (Af)	Others (O)	Total
Bush (B)						
Gore (G)						
Others (E)						
Total						1.00

4) Calculate $P(W \cap B)$ and write its value in the corresponding cell in the table. Explain what this probability represents.

5) Calculate the remaining probabilities to complete the first row of the table.

6)   What is the probability of randomly selecting a voter who voted for Bush?

7)   Use the following information to complete the table:

Al Gore (G) received: 42% of the white vote, 90% of the African-American vote, 62% of the Hispanic vote, 55% of the Asian vote, and 55% of the "other" vote.