MA 110 WORKSHEET (8.2) "EXTRA WORKSHEET 4"

Name ___Solutions_____

Blood Type	Male M	Female F	TOTALS
O	80	370	450
A	150	250	400
B	50	50	100
AB	20	30	50
TOTALS	300	700	1,000

Use the table to find the probability that a person is selected at random from the group

A.   has blood type B? P(B)

(sum of row B)/ 1000 = 100/1000

B.   is female **and** has blood type B? P(F $\cap$ B)

(Row B intersect column F)/ 1000 = 50/1000

C.   the person is female **or** has blood type B? P(F $\cup$ B)

(sum of column F plus row B intersect column M)/1000

(370 + 250 + 50 + 30 + 50)/1000 = (700 + 50)/1000 = 750/1000

D.   is female? P(F)

(Sum of column F)/1000 = 700/1000

E.   is female **and** does not have blood type B? P(F $\cap$ B')

(Sum of column F without row B)/1000

(700 − 50)/1000 or (370 + 250 + 30)/1000 = 650/1000