

Math 1160 – Section 6.3 Answer Key

4. $6/50 = 3/25 = .12$ or 12%

6a. $3/9 = 1/3$

6b. $5/9$

6c. $6/9 = 2/3$

8a. No (do not add up to 1)

8b. No (can not have a negative probability)

8c. No (do not add up to 1 and can not have a probability of 2)

8d. Yes (the probabilities add up to 1 and all are values between 0 and 1)

10a. $Pr(E) = Pr(s_1) + Pr(s_2) = .05 + .25 = .30$

$$Pr(F) = Pr(s_3) + Pr(s_5) + Pr(s_6) = .05 + .63 + .01 = .69$$

10b. $Pr(E') = Pr(s_3) + Pr(s_4) + Pr(s_5) + Pr(s_6) = .05 + .01 + .63 + .01 = .70$

10c. 0 (They have no outcomes in common.)

10d. $Pr(s_1) + Pr(s_2) + Pr(s_3) + Pr(s_5) + Pr(s_6) = .99$

16a. .28

16b. .49

16c. .69

16d. Odds are 77 to 23

16e. Odds are 51 to 49

16f. Odds are 9 to 41

18a. .1 (Drawing the Venn Diagram will help on this problem.)

18b. .8

27a. $Pr(20-34) = .15$

$$Pr(35-49) = .55$$

$$Pr(50-64) = .20$$

$$Pr(65-79) = .10$$

27b. $Pr(50-64) + Pr(65-79) = .20 + .10 = .30$

28a. $1600/7370 = 160/737 = .2171$

28b. $Pr(\text{House is less than 7 years old}) = 4370/7370 = 437/737$

The odds the house is less than 7 years old is 437 to 300.