

Special Problem 5 answers

AP Statistics - Special Problem 5

Answers

	Male	Female	Total
Completed assignment	4	8	12
Did not complete	4	14	18
Total	8	22	30

a. $P(\text{completed hw}) = 12/30 = 0.4$

b. No. $P(\text{complete} | \text{female}) = 8/22 = .364$

is not equal to $P(\text{complete}) = 12/30 = .4$

Knowing that a student is female increases the probability that the assignment wasn't completed.

c. Let 01-12 = completed the assignment and 13-30 = didn't complete. ignore 00 and 31-99. Do a few trials...

d. Trial 1:

73676 47150 99400 01927 27754 42648 82425 36290

45467 71709

Trial 2:

N, N, N, N, N = 0/5

09 77558 00095 32863 29485 82226 90056

52711 38889 93074 60227

Y, N, N, Y, Y = 3/5

Trial 3:

27 40011 85848 48767 52573

95592 94007 69971 91481 60779 53791 17297 59335

N, Y, N, N, N = 1/5

So, $P(2 \text{ or fewer completed}) = 2/3 = .66$