

MAT-120 – HW #9– Answers

Please select the correct answer number of each question. There are more answers than questions.
Answers may be repeated.

1) $P(W \text{ or } C) = P(W) + P(C) - P(W \text{ and } C) = 422/2223 + 109/2223 - 0/2223 = 531/2223 = 0.239$

2) $P(O) = 1 - P(O) = 1 - 31/365 = 334/365$ OR 0.915

3) **Increases, 14.7%**

4) $P(A) = 1 - P(A) = 1 - 40/100 = 60/100 = 0.60$

5) $P(C \text{ or } S) = P(C) + P(S) - P(C \text{ and } S) = 109/2223 + 706/2223 - 56/2223 = 759/2223 = 0.341$

6) $P(W \text{ or } D) = P(W) + P(D) - P(W \text{ and } D) = 422/2223 + 1517/2223 - 104/2223 = 1835/2223 = 0.825$

7) $P(Y \text{ or } P) = P(Y) + P(P) - P(F \text{ and } R) = 6/14 + 9/14 - 4/14 = 11/14$ or 0.786

8) $P(O) = 1 - P(O) = 1 - 1/365 = 364/365$ or 0.997

9) $P(Rh) = 14/100 = 0.14$

10) $P(M \text{ or } S) = P(M) + P(S) - P(M \text{ and } S) = 1692/2223 + 706/2223 - 332/2223 = 2066/2223 = 0.929$

11)

Not a good idea, because this would be an extrapolation and x-value of 0.156 is well outside of the range of values the regression equation was based upon.

12)

$$\hat{y} = 2.94(0.350) - 0.4875 = 0.5415$$