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CSE 4309 – Assignment 1

***Task – 1:***

**Answer:**

The time complexity of this function is ***Θ(n).***

***Task – 2:***

**Answer:**

|  |
| --- |
| ***def factorial(n):  result = 1  if n == 1 or n == 0:  return result  else:  result = n \* factorial(n-1)  return result*** |

***Task – 3:***

**Answer:**

The time complexity of this function is ***Θ(n2).***

**Task – 4:**

**Answer:**

A \* B =

***Task – 5:***

**Answer:**

𝑓 ′ (𝑥) = 6𝑥 + 5

𝑓 ′ (5) = 35

𝑓 " (𝑥) = 5

𝑓"(𝑥) = 5

***Task – 6:***

**Answer:**

P (A and B) = 0.3 \* 0.6 = 0.18

P (A or B) = 0.3 + 0.6 = 0.9

P (not (A)) = 1 – P(A) = 1 – 0.3 = 0.7

P (A|B) = P (A) = 0.3

***Task – 7:***

**Answer:**

P (price < $75) = = 0.6375

P (price < $75 | color = green) = = 0.6842

P (price < $75, color = green) = P (price < $75 | color = green) \* P (color = green)

= 0.6842 \*

= 0.6842 \* 0.2375

= 0.1625

***Task – 7:***

**Answer:**

Ten hens lay **50** eggs in ten days.