Daniel Tam
1001724986

Task 1:

Θ(n)

Task 2:

```
def factorial(n):
    if n == 1:
        return 1

    return n * factorial(n-1)

print(factorial(7)) # returns 5040
```

Task 3:

Θ(n^2)

Task 4:

$$\begin{bmatrix} a(e)+b(f) \\ c(e)+d(f) \end{bmatrix}$$

Task 5:

(a): 6x + 5
(b): 35
(c): 6
(d): 6

Task 6:

P(A and B): (0.3 * 0.6) = 0.18
P(A or B): (0.3 + 0.6) - (0.18) = 0.72
P(not(A)): (1 – 0.3) = 0.70
P(A | B): (0.18 / 0.6) = 0.3

Task 7:

(a): 0.6375
(b): 0.6842
(c): 0.1625

Task 8:

If two hens lay two eggs in two days, we can say that each hen lays one egg in two days. So, ten hens will lay ten eggs in two days. In ten days, there will be fifty eggs laid by ten hens.