2)

1. According to given values, duty cycle (D) range is 0.25 - 0.6875. This range is found using the equation AA. The converter should be operating in CCM operation between this duty range.

AA

And using the given constant output voltage and rated output power in equation BB, the output current is found to be 1A where the load resistance is found to be 16Ω.

BB

In order to find **minimum** inductance that would keep de converter operating in CCM operation, the output current should be equal to output current boundary value.

The output current boundary value can be found using the equation X1

X1

The possible L range with respect to found data is 895.2 – 1875 mH. If 895.2 (i.e. minimum value of the possible inductor range) is chosen, the converter cant operate in CCM operatipon mode when duty cycle is below 0.6875. In order to converter operate in CCM operation mode under given all circumstances, L should be chosen as 1875 mH.