4. [8 points] For a certain computer, $P(f)$ measures the amount of power the computer consumes in Watts (W) as a **linear** function of the frequency, f, which is measured in Gigahertz (GHz). At the frequency $f = 0.8$ GHz the computer consumes 8 W of power; at the frequency $f = 3.4$ GHz the computer consumes 125 W of power.

a. [3 points] Find the slope of $P(f)$ and give its units. *Show all work. Give your answer rounded to at least two decimal places.*

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b. [2 points] Suppose we open a new application on the computer and the frequency increases by 2.8 GHz. By how many watts (W) did the power consumption, $P(f)$, increase? *Show all work. Give your answer in exact form or rounded to at least two decimal places.*

_____ Watts

c. [3 points] Find a formula for $P(f)$. *Show all work. Express all constants in exact form or rounded to at least two decimal places.*

$P(f) =$ _____