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**Report:**

Based on the plots we can see that as the value of betamax increases the amount of infected is more than it was in the base value. On the other hand, we can see that as the value of betamax decreases the amount of infected decreases. So the value of Betamax is proportional to the amount of infected.

In lab 8 we saw similar outcomes. In lab 8 as we increased the value of beta the amount of infected would increase.

Therefore, in lab 8 & 9 both cases beta is proportional to the amount of infected.