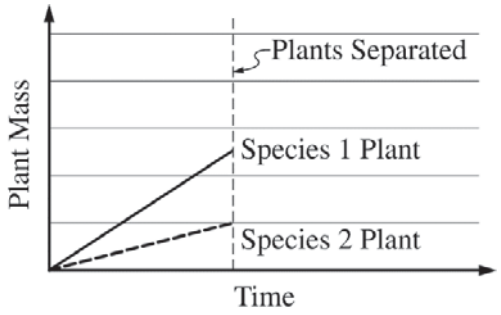
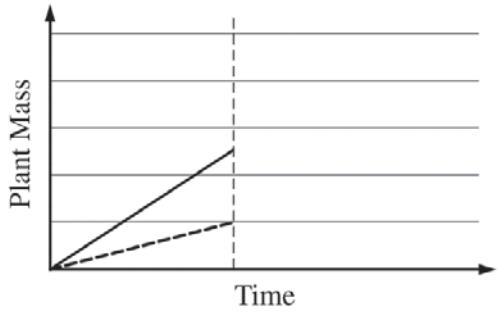


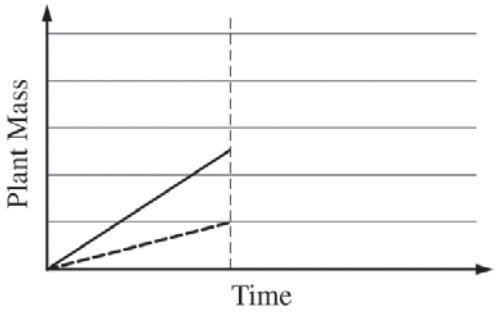
5. The graph above shows the mass of plants from two different species over time. The plants grew while attached to each other. The plants were separated at the time indicated by the vertical line in the graph.

   Using template 1, **graph** the predicted shape of the plant-mass lines after separation of the two plants if the plants were in an obligate mutualistic relationship. On template 2, **graph** the predicted shape of the plant-mass lines if the species 2 plant was a parasite of the species 1 plant. **Justify** each of your predictions.

TEMPLATE 1: OBLIGATE MUTUALISM



TEMPLATE 2: PARASITISM



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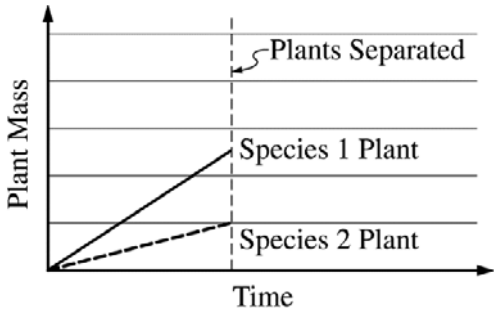
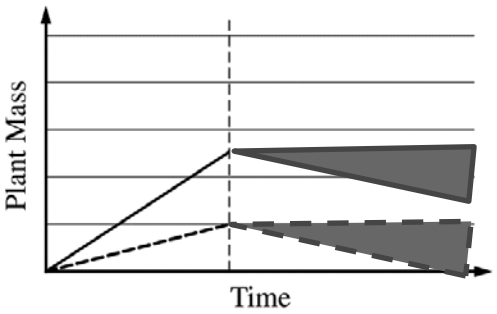
Question 5



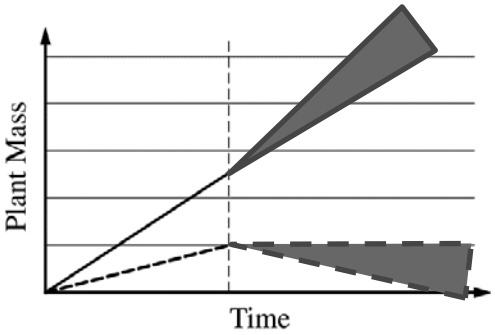
The graph above shows the mass of plants from two different species over time. The plants grew while attached to each other. The plants were separated at the time indicated by the vertical line in the graph.

Using template 1, **graph** the predicted shape of the plant-mass lines after separation of the two plants if the plants were in an obligate mutualistic relationship. On template 2, **graph** the predicted shape of the plant-mass lines if the species 2 plant was a parasite of the species 1 plant. **Justify** each of your predictions. **(4 points)**

TEMPLATE 1: OBLIGATE MUTUALISM



TEMPLATE 2: PARASITISM



	Graph characteristics (1 point each graph; 2 points maximum)	**Justification (1 point each box; 2 points maximum)**
Obligate Mutualism	Both of the growth curves level off or decline.	• Each species depends on the other for survival. • Without the relationship, both species are harmed.
Parasitism	Species 1 continues to increase while species 2 levels off or declines.	• The parasite requires an association with the host to survive but harms the host. • Without the relationship, the parasite cannot survive while the host continues to grow.