

Nā Wai 'Ekolu Stream Data: Grades 6 to 8

Calculating Ratios and Drawing Diagrams



Below is sample data collected at 3 different sites along Mānoa Stream in 2017. Use the count of native and non-native species at each location to determine the ratio of native species to invasive species at each relative location (upstream, midstream, and downstream) then do the activity on page 2 and answer the questions on the supplementary worksheet provided.

Date	Location	Relative location	Origin	Species	Common Name	Count	Total	Ratio of native species to invasive species at relative location (native : invasive)
1/13	Manoa Marketplace	downstream	Native	<i>Awaous stamineus</i>	Oopu Nakea	2	223	_____ : _____
1/13	Manoa Marketplace	downstream	Non-native	<i>Melanooides tuberculata</i>	Malaysian Trumpet Snail	1		
1/13	Manoa Marketplace	downstream	Non-native	<i>Ancistrus temminckii</i>	Bristlenose/Bushynose Plecostomus	8		
1/13	Manoa Marketplace	downstream	Non-native	<i>Poecilia reticulata</i>	Rainbow Guppy	2		
1/13	Manoa Marketplace	downstream	Non-native	<i>Procambarus clarkii</i>	Swamp Crayfish	1		
1/13	Manoa Marketplace	downstream	Non-native	<i>Poecilia sphenops</i>	Mexican Molly	45		
1/13	Manoa Marketplace	downstream	Non-native	<i>Hypostomus watwatta</i>	Suckermouth Catfish/ Plecostomus	164		
5/3	Waihi	midstream	Native	<i>Awaous stamineus</i>	Oopu Nakea	1	847	_____ : _____
5/3	Waihi	midstream	Non-native	<i>Ancistrus temminckii</i>	Bristlenose/Bushynose Plecostomus	185		
5/3	Waihi	midstream	Non-native	<i>Poecilia sphenops</i>	Mexican Molly	1		
5/3	Waihi	midstream	Non-native	<i>Poecilia reticulata</i>	Rainbow Guppy	622		
5/3	Waihi	midstream	Non-native	<i>Xiphophorus helleri</i>	Green Swordtail	33		
5/3	Waihi	midstream	Non-native	<i>Procambarus clarkii</i>	Swamp Crayfish	5		
6/19	Waiakeakua	upstream	Non-native	<i>Poecilia reticulata</i>	Rainbow Guppy	78	246	_____ : _____
6/19	Waiakeakua	upstream	Non-native	<i>Ancistrus temminckii</i>	Bristlenose/Bushynose Plecostomus	45		
6/19	Waiakeakua	upstream	Non-native	<i>Xiphophorus helleri</i>	Green Swordtail	4		
6/19	Waiakeakua	upstream	Non-native	<i>Neocaridina denticulata sinensis</i>	Japanese Swamp Shrimp	115		
6/19	Waiakeakua	upstream	Non-native	<i>Procambarus clarkii</i>	Swamp Crayfish	4		


Divide the tape diagram into sections then shade in the diagram with different colors to illustrate the ratio of native to invasive species downstream then compare your answer to the tape diagram on page 3. Be sure to include labels on your diagram.

native species : invasive species = _____ : _____



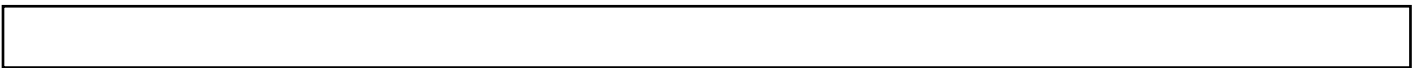
Divide the tape diagram into sections then shade in the diagram with different colors to illustrate the ratio of native to invasive species midstream then compare your answer to the tape diagram on page 3. Be sure to include labels on your diagram.

native species : invasive species = _____ : _____



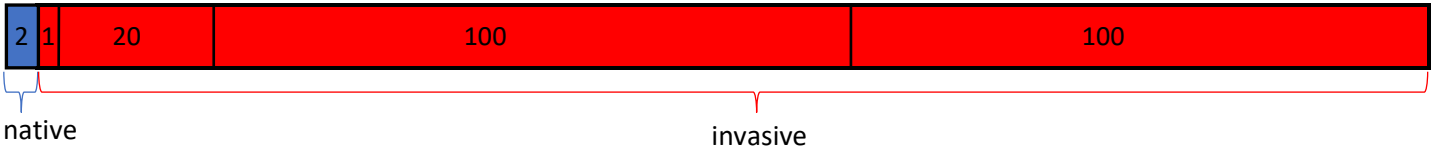
Divide the tape diagram into sections then shade in the diagram with different colors to illustrate the ratio of native to invasive species upstream then compare your answer to the tape diagram on page 3. Be sure to include labels on your diagram.

native species : invasive species = _____ : _____



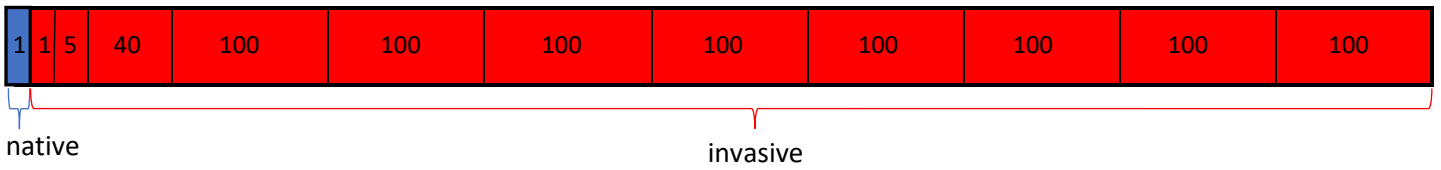
Downstream

native species : invasive species = 2 : 221



Midstream

native species : invasive species = 1 : 846



Upstream

native species : invasive species = 0 : 100

