o I	oulations / Communities name: Socy TONS				
1)	What do individuals living in a population share in common? Water, food supplies, Resources.				
2)	For the state of t				
	-Palm trees in Hawai in 2004 Caribou living in Canada in 2023				
3)	For each of the following situations, which factor (births, deaths, immigration, emigration) is causing a change in population.				

During the spring season, Geese return to a particular lake. L

Due to the noises caused by deforestation activities, deer have fled to other areas.

Commercial nets have been placed in some B.C rivers to catch Salmon.

A Brown bear raises its young A

- Residences of some homes have installed mouse traps.
- What will happen if mortality rates are greater than birth rates and emigration is greater than immigration in a Population decrease given population?
- 5) The Canadian Department of Oceans and Fisheries wish to determine the population of wild fish living in a particular lake. To do so they first capture and tag 50 fish. Several days later scientists capture 55 fish of which 11 have been tagged.

What method has been used to determine population size? Capture - Recapture

b. What is the population size of wild fish living in this lake?

Popsize = 50.55 = 250 fish

6) a) What are the 2 principal factors that can vary population densities? Availability of food & water b) What are 2 other factors that have an affect on population densities? Climate, Predators, Diseases, Natural disasters, Human decolopment

7) What type of distribution can be observed in the following situations:

a) In a forest, pine trees grow in haphazard locations. **Readom** 

b) Mushrooms grow in groups on the trunks of trees.

- c) The Colibris hummingbirds defend their personal territory very aggressively from other hummingbirds. They have the tendency to keep the same distance apart from each other.
- 8) Which method for determining population size would be best in each of the following:

a) Spiders in a forest - Sampling

- b) Maple trees in a park Counting
   c) Squirrels living in a park. Capture Recapture
- 9) There is an average of 7 weeds in every 5 m<sup>2</sup> in a city cemetery. If the cemetery is 6000m<sup>2</sup>.

a) How many weeds are there in the entire cemetery?

Pop size: 7.6000 = 8400 weeds

b) What is the population density of weeds within the entire cemetery?

8400 weeds , 1.4 veeds/m2

a) How many caribou make up this population?  **Rop size = 25.39 = 65 caribou*  b) If the Charlevoix occupies 3900km² of area, what is the population density of the caribou?  65 caribou*  3900 Km²  11) In the following situations state whether we are dealing with a biotic or abiotic ecological factor, and whether it is a limiting factor or a non-limiting factor. Circle correct answers  a) In a certain community garden, tomatoes don't receive enough sunlight and therefore do not ripen.  Biotic or Abiotic Limiting Factor or Non-Limiting Factor  b) Spider populations have increased due to increases in available food (mosquitoes).  **Biotic or Abiotic Limiting Factor or Non-Limiting Factor*  c) The current winter has been so cold that a given species has had trouble traveling/moving around.  Biotic or Abiotic Limiting Factor or Non-Limiting Factor*  12) Why is it that the population of Lynx living in the Quebec North tends to decrease while the Snowshoe Hare population seems to be low?  13) The South American Rainforest is said to be the most diverse forest in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such a statement?  **Many difficult type of species in the world. Why would scientist make such as the relative abunda	<ol> <li>Scientists capture and tag caribou, of which 15 have</li> </ol>	previous tags on them		ear later scientists captur	re 39			
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<ul> <li>a) For there to be competition there must be a limited resource being sought after.</li> <li>b) Fish are in competition with each other for the control is it.</li> </ul>	16) True or False:				species			
b) Fish are in competition with each other for the section of the	a) For there to be com	npetition there must be a lim	nited resource being sought of	- asiot and its				
with each other for the water in the lake.	b) Fish are in competi	tion with each other for the	water in the lake					
c) Neighboring plants are in competition for soil nutrients T	c) Neighboring plants	are in competition for soil	nutrients T					
d) For there to be predation one species must die.	d) For there to be pred	lation one species must die.	F should shad got I					
e) Parasites cause no harm to their host.								
f) Bees pollinating flowers is an example of a mutualism.  g) Humans feeding pigeons in a park is an example of commenced in the second of the								
g) Humans feeding pigeons in a park is an example of commensalism.	g) Humans reeding pi	geons in a park is an examp	le of commensalism.					
17) The following represents the contents of two aquariums (same sized aquariums). Study the info below:	17) The following represents the	e contents of two aquar	riums (same sized aquariu	ıms). Study the info belo	w:			
Individuals in Aquatium A Data's At a to a local			The Part of the Part of the last of the la	more alcometate to	wage 570.			
Crasics is A Marvious in Aquarium B   Relative Abundance of								
8 Goldfish	8 Goldfish	0/ -1						
2 Angel fish								
1 Snail 8 × 0 Snail								
0 Scavenger fish 2 Scavenger fish								
1 Guppy 8 % 3 Guppy 30 %	1 Сирру	8 %						

a) What can be said about the species richness:

c) Which of the 2 aquariums has the greater biodiversity?

b) Fill in the columns for the relative abundance of each species found in each aquarium.