

Biomes, Populations and Communities worksheet

1. Which of the following communities living in a forest has the greatest biodiversity?

- A) 50 bears, 60 rabbits, 58 beavers, 25 for trees and 15 birch trees
- B) 4 bears, 30 rabbits, 7 beavers, 25 fir trees and 10 birch trees
- C) 50 bears, 100 rabbits, 7 beavers, 25 for trees and 15 birch trees
- D) 25 bears, 60 rabbits, 58 beavers, 5 fir trees and 7 birch trees

2. Which answer best describes what a coral reef is?

- A) Coral reefs are non-living substances that float in the ocean
- B) Coral reefs are a type of fish that live in oceans
- C) Coral reefs are organisms whose skeleton is made up of CaCO_3 and feed on algae
- D) Coral reefs are a type of rock that other fish use as shelter

3. Scientists wanted to monitor the population of tigers in the savannah over a 2 year period. Use the information on the table to determine whether there was an increase, decrease or stable population after the 2 years. Show the calculations.

	Births	Deaths	Emigration	Immigration
Year 1	9	4	7	3
Year 2	12	6	5	9

21 10 12 12 $33 - 22 = 11$

$B + I = 21 + 12 = 33$ $D + E = 10 + 12 = 22$

4. You counted 23 tulips in an 800 m^2 area, what is the population density?

$23 / 800 = \cancel{28.8} / \text{m}^2$
 0.029 m^2

5. The table below lists the contents of two aquariums, A and B, both with a capacity of 50 L. Find the relative abundance of each species.

Aquarium A	Aquarium B
37 goldfish	35 goldfish
2 striped fish	30 striped fish
5 snails	31 snails
3 green algae	45 green algae
0 fern	32 ferns

Find the relative abundance for each species.

	Goldfish	Striped fish	Snails	Green algae	Ferns
Aquarium A	74%	4.3%	11%	6%	0%
Aquarium B	20%	17%	18%	26%	18%

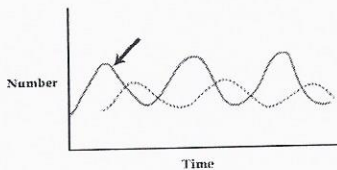
Explain which aquarium has a greater biodiversity.

B - more types of species
 - better distributed species
 - good total population.

6. Identify the type of interaction between the living organisms in each of the following situations. (competition, predation, parasitism, mutualism and commensalism)

Bees pollinate flowers	mutualism
A bird finds and lives in an old empty nest	commensalism
A maggot lays eggs in a wasp	parasitism
Crows eat the remains of an animal left by a wolf	commensalism
Two gorillas are fighting over a mate	competition
Photosynthesis respiration processes	mutualism
A clown fish's waste provides food for the sea anemone, while the sea anemone provides shelter and protection to the clown fish	"
Two wolves fighting over territory	competition

7. Looking at the diagram below, state whether the arrow is pointing to the prey or the predator and explain your answer.



prey - there must always be more prey or relationship would not work. Predator would run out of food.

8. State the biome being described in each statement.

Lack of clouds causes high temperature variations	desert
Cold all year long	arctic
Temperature and light varies on depth	ocean
Not enough moisture for trees, but enough not to be a desert	grasslands...
Current flows in 1 direction	river
Has permafrost	arctic
Rains all year long and very warm temperatures	rainforest
Contains the benthos	ocean
Produces a large amount of the world's oxygen	rainforest
Has acidic, nutrient poor soil	boreal
Became towns and cities	temperate
Type of wetland where trees can grow	swamp
Type of biome that has saturated soil	wetlands
The largest ecosystem	ocean
Where fresh and marine water mix	estuary
Has the ability to survive drought and fire	grassland
Made from corals	coral reef
Sensitive to fire, insects and disease	boreal
Defined by altitude	alpine