**APES Review Worksheet #3**

1. Perform the following calculations: (Show all of your work.)
   1. A rectangular area of forest that measures 10 thousand meters by 300 thousand meters has an area of \_\_\_\_\_\_\_\_\_\_\_ square kilometers and \_\_\_\_\_\_\_\_\_\_\_ hectares.

Show work:

* 1. A 60-Watt light bulb that is used for an average of 4 hours each day uses \_\_\_\_\_\_\_\_\_\_\_ kilowatt-hours of electricity per year.

Show work:

1. List two characteristics of an r-selected species.

1) 2)

1. List two characteristics of a K-selected species.

1) 2)

1. A Pacific Yew is a \_\_\_\_\_\_\_\_\_\_\_\_ and it is endangered because of the following:

1. A Piping Plover is a \_\_\_\_\_\_\_\_\_\_\_\_ and it is endangered because of the following:

1. An Orangutan is a \_\_\_\_\_\_\_\_\_\_\_\_ and it is endangered because of the following:

1. A Dodo was a \_\_\_\_\_\_\_\_\_\_\_\_ and it is extinct because of the following:

1. Complete the following table:

|  |  |
| --- | --- |
| Ecosystem Component | Ecosystem Services |
| honey bee |  |
| water cycle |  |
| forest |  |
| bat |  |
| bacteria |  |
| coral reef |  |
| wetland |  |

1. A company is importing rare tropical hardwood to manufacture furniture, list three laws, regulations, treaties, or acts that the company may have violated.

1)

2)

3)

1. Whaling is justified in the name of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ research, by the countries of \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_.
2. Two islands, different distances from the mainland have different rates of extinction, this is explained by the theory of island \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a technique typically used to harvest scallops, crabs, and shrimp from the sea floor.
4. A fishing practice that is commonly used to catch large solitary species of fish and was featured in *The Perfect Storm* is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. List four innovations that led to the Green revolution.

1)

2)

3)

4)

1. To live a healthy, active life most adults need to consume approximately \_\_\_\_\_\_\_\_\_\_\_ calories of food each day.
2. Arrange the following foods in order of highest to lowest in terms of global production: corn (maize), rice, wheat

1) 2) 3)

1. Match the following:
   1. anemia iron deficiency
   2. goiter vitamin A deficiency
   3. scurvy vitamin D deficiency
   4. rickets iodine deficiency
   5. blindness vitamin C deficiency
2. Use the axes below to draw and label an illustration of the pesticide treadmill.

Pest Population

size

Time

1. Arrange the following particles in order of smallest to largest: clay, sand, silt

1) 2) 3)

1. Explain how the biomagnification of DDT led to the demise of the Bald Eagle population in the US.

1. \_\_\_\_\_% of the Earth is covered with water. Of all the water on Earth \_\_\_\_\_% of it is saltwater, \_\_\_\_\_% is frozen, and \_\_\_\_\_% is available and relatively accessible.
2. List three things you could do to conserve water.

1)

2)

3)

1. Perform the following calculations: (Show all of your work.)
   1. A family of 5 replaces a 6-gallon/minute showerhead with a new 2-gallon/minute low-flow showerhead. If every member of the family takes one 10-minute shower per day, the family will save \_\_\_\_\_\_\_\_\_\_\_ gallons of water in one year.

Show work:

* 1. A family has a rectangular swimming pool that measures 15 ft by 20 feet. If water evaporates from the pool at a rate of 50 gallons per square foot per year and a pool cover will reduce evaporation by 90 percent, the family can save \_\_\_\_\_\_\_\_\_\_\_ gallons of water per year by using a pool cover.

Show work:

1. Define the following:
   1. pH
   2. turbidity
   3. water hardness
   4. biological oxygen demand
   5. organic waste
   6. cholera
   7. schistosomiasis
   8. giardia