

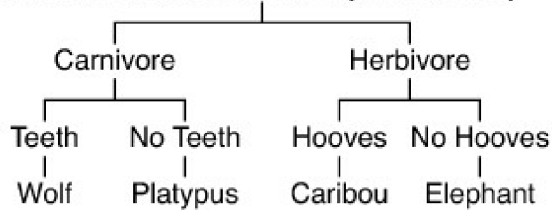
Classification Questions

Name: _____

Date: _____

1. According to the classification key, what characteristic does a wolf have in common with a caribou?

Animals with Backbones (Vertebrates)



- A. Backbone B. Flat tails
C. Hooves D. Teeth

2. The table below shows the classifications of four animals.

Animal Classification

| Animal | Q | R | S | T |
|--------------------------|-------------------------|---------------------|-----------------------------|-------------------------|
| Kingdom | Animalia | Animalia | Animalia | Animalia |
| Phylum | Chordata | Chordata | Chordata | Chordata |
| Class | Mammalia | Mammalia | Mammalia | Mammalia |
| Order | Carnivora | Rodentia | Rodentia | Carnivora |
| Family | Canidae | Muridae | Muridae | Felidae |
| Genus and Species | <i>Canis familiaris</i> | <i>Mus musculus</i> | <i>Mesocricetus auratus</i> | <i>Felis sylvestris</i> |

According to their classification, which of the following animals are *most* closely related?

- A. Q and R B. S and T
C. Q and T D. R and S

3. A lynx, *Lynx canadensis*, has a short tail with a black tip running all the way around the tail. It also has highly visible tufts of hair on the ears. A bobcat, *Lynx rufus*, has a short tail with black only on top of the tail's tip. It also has inconspicuous ear tufts. From the descriptions and scientific names of both animals you can conclude that

- A. the lynx and bobcat are the same species.
B. "lynx" and "bobcat" are two names for the same animal.
C. the lynx and bobcat are the same genus.
D. the lynx and bobcat are not from the same phylum.

4. Use this dichotomous key to answer the question.

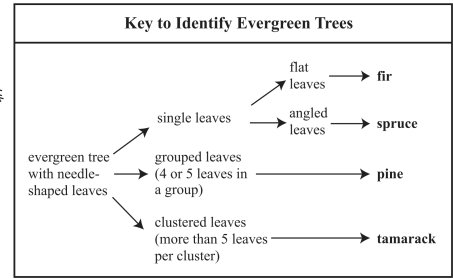
Reptiles and Amphibians

| | | |
|-----|--|------------|
| 1a. | Has external gills | Go to 6. |
| 1b. | Does not have external gills | Go to 2. |
| 2a. | Has scales | Go to 3. |
| 2b. | Does not have scales | Go to 4. |
| 3a. | Has a shell | turtle |
| 3b. | Does not have a shell | Go to 5. |
| 4a. | Has a tail as an adult | Go to 6. |
| 4b. | Does not have a tail as an adult | frog |
| 5a. | Has legs | lizard |
| 5b. | Does not have legs | snake |
| 6a. | Has coastal grooves along the side | salamander |
| 6b. | Does not have coastal grooves along the side | newt |

Trish constructed a dichotomous key to help identify the reptiles and amphibians living in a certain area. Which phrase describes a lizard?

- A. an animal with scaly skin and a shell but no external gills
- B. an animal with scaly skin and legs but no shell
- C. an animal with legs and coastal grooves but no tail
- D. an animal with external gills and a tail but no coastal grooves

5. While on a walk, Samuel saw a tree he had not seen before. He used a key to help him identify the type of tree. A branch from the tree and the key he used are shown below.



Based on the key, which type of tree did Samuel *most likely* see?

- A. fir
- B. spruce
- C. pine
- D. tamarack

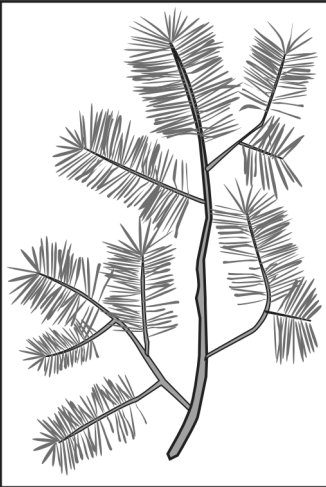
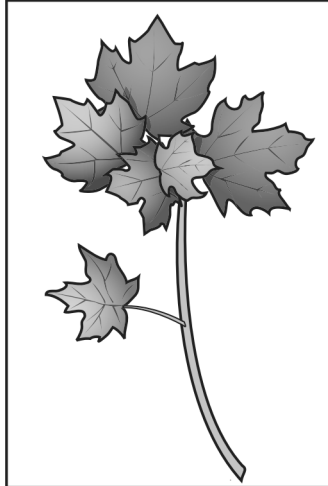
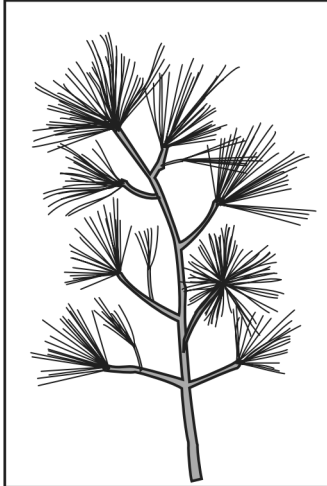
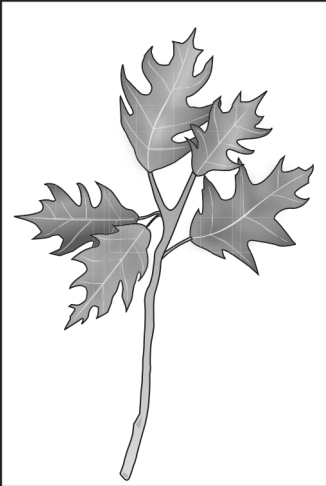
6. The chart below lists the organisms that Tamara sorted into two groups based on one physical characteristic.

| Group 1 | Group 2 |
|-----------|---------|
| alligator | bat |
| goldfish | deer |
| snake | mouse |
| tuna | rabbit |

Which of the following physical characteristics did Tamara *most likely* use to sort the organisms into the two groups?

- A. number of legs
- B. size of the body
- C. shape of the feet
- D. type of body covering

7. The pictures below show parts from four different plants.



Based on the pictures, which of the following physical characteristics would be *best* to use to sort the plants into two groups?

- A. the shape of the leaves
- B. the length of the leaves
- C. the length of the branches
- D. the thickness of the branches

8. If a new organism were discovered, which of the following would most likely be used to classify it into the appropriate kingdom?
- A. the color of the organism
 - B. the organism's natural habitat
 - C. the structure of the organism's anatomy
 - D. the location where the organism was found

9. An amoeba, an oak tree, a squirrel, and mildew are all classified in the same
- A. domain.
 - B. kingdom.
 - C. genus.
 - D. species.

10. Which of the following is an example of a prokaryotic organism?
- A. bacterium
 - B. celery
 - C. horse
 - D. mushroom

11. All organisms classified in kingdom Animalia must also be classified as which of the following?
- A. Archaea
 - B. Eubacteria
 - C. Eukaryota
 - D. Protista

12. Blue jays and kingbirds are both classified in the order Passeriformes. In the current taxonomic system, this means that the two types of birds must also belong to the same
- A. family.
 - B. genus.
 - C. phylum.
 - D. species.

13. The table below provides classification information for four different mammals.

Scientific Classification of Four Mammals

| Classification Level | Mammal 1 | Mammal 2 | Mammal 3 | Mammal 4 |
|----------------------|-------------------|-------------------|----------------|---------------------|
| Order | Rodentia | Lagomorpha | Rodentia | Rodentia |
| Family | Castoridae | Leporidae | Sciuridae | Sciuridae |
| Genus | <i>Castor</i> | <i>Sylvilagus</i> | <i>Sciurus</i> | <i>Sciurus</i> |
| Species | <i>canadensis</i> | <i>floridanus</i> | <i>niger</i> | <i>carolinensis</i> |

Which of these mammals are most closely related to each other?

- A. 1 and 2
 - B. 1 and 3
 - C. 2 and 4
 - D. 3 and 4
14. Scientists have discovered a new type of organism. To assign the organism to a domain and kingdom, which of the following is *most* important for scientists to know?
- A. the organism's cell structure
 - B. the organism's population size
 - C. the organism's social behavior
 - D. the organism's reproductive rate

15. *Danaus plexippus* and *Danaus gilippus* are two species of butterflies. Which of the following statements *best* explains why scientists classify them as two different species?

- A. Only one of the species migrates in winter.
- B. Only one of the species is found in North America.
- C. The two species are not eaten by the same predators.
- D. The two species cannot produce fertile offspring with each other.

16. Prokaryotes are structurally simple organisms that have existed for over two billion years. Which of the following are prokaryotes?

- A. bacteria
- B. fungi
- C. plants
- D. protists

17. Two populations of fruit flies both belong to the genus *Drosophila*. The fruit flies are able to successfully mate within their own populations, but males from one population are unable to mate and produce offspring with females from the other population.

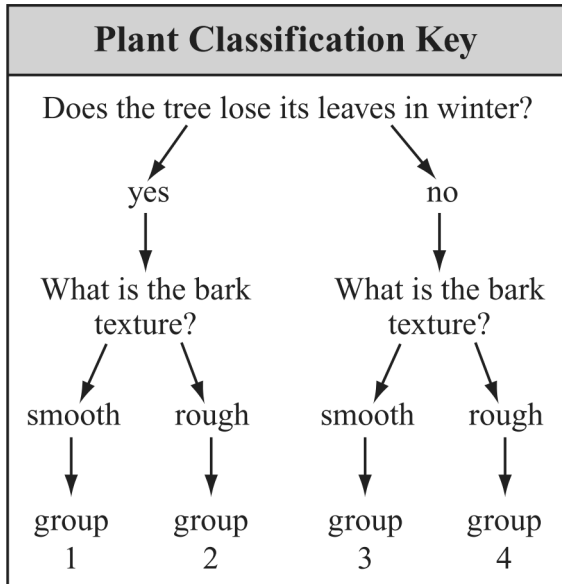
Based on this information, which of the following statements could describe the fruit flies in the two populations?

- A. They are classified as different orders.
- B. They are classified in different classes.
- C. They are classified as different species.
- D. They are classified in different kingdoms.

18. Lobsters and spiders are both classified in the phylum Arthropoda. Lobsters and spiders are therefore also classified in the same

- A. class.
- B. family.
- C. genus.
- D. kingdom.

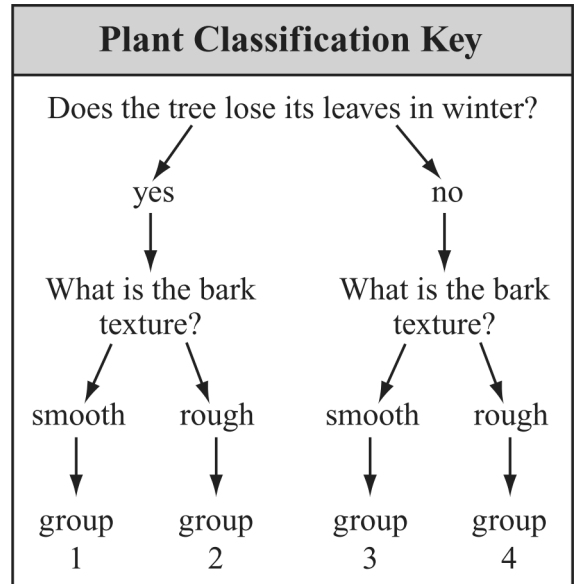
19. Kate is using the key shown below to classify a tree into one of four different groups.



The tree loses its leaves in winter and has rough bark. According to the key, into which group should the tree be classified?

- A. group 1 B. group 2
C. group 3 D. group 4

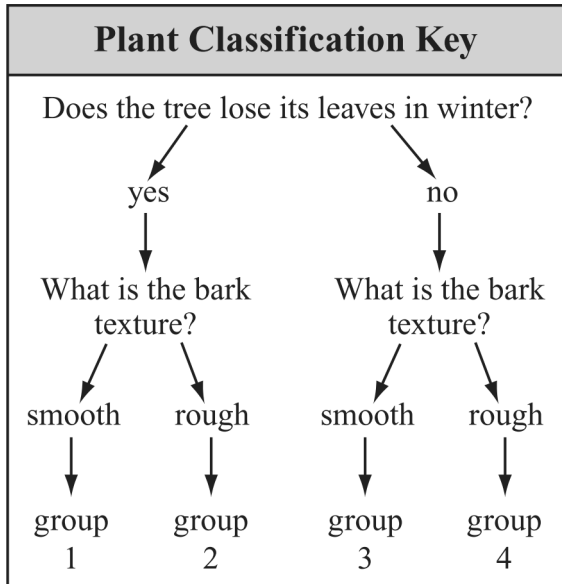
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 C. group 3 D. group 4
22. The scientific name for the cougar is *Puma concolor*. Which of the following organisms is most closely related to the cougar?
- A. *Corythaixoides concolor*
 B. *Lynx rufus*
 C. *Panthera tigris*
 D. *Puma yagouaroundi*

23. Which of the following is *most* important in classifying two groups of bears into the same genus?

- A. similar diets B. similar genes
 C. similar habitat D. similar body size

24. Use the information below to answer the following question(s).

The data table below shows information a student collected.

FEATURES OF FOUR ANIMALS

| Animal 1 | Animal 2 | Animal 3 | Animal 4 |
|-----------------------|-----------------|-----------------------------|------------------|
| • Lives on land | • Lives on land | • Lives on land or in water | • Lives in water |
| • Has dry, scaly skin | • Has feathers | • Has moist skin | • Has scales |
| • Has lungs | • Has lungs | • Has lungs | • Has gills |
| • Lays eggs | • Lays eggs | • Lays eggs | • Lays eggs |
| • Cold-blooded | • Warm-blooded | • Cold-blooded | • Cold-blooded |

Snakes, tortoises, and alligators are examples of reptiles. Most reptiles live on land and have scales. Reptiles were the first animals to develop the ability to lay hard-shelled eggs.

Based on this information and the data table, which animal is *most likely* a reptile?

- A. Animal 1 B. Animal 2
 C. Animal 3 D. Animal 4
25. All of the following are classification levels *except*—
- A. order. B. protist.
 C. phylum. D. class.

26. The classification levels of three organisms are listed in the following chart.

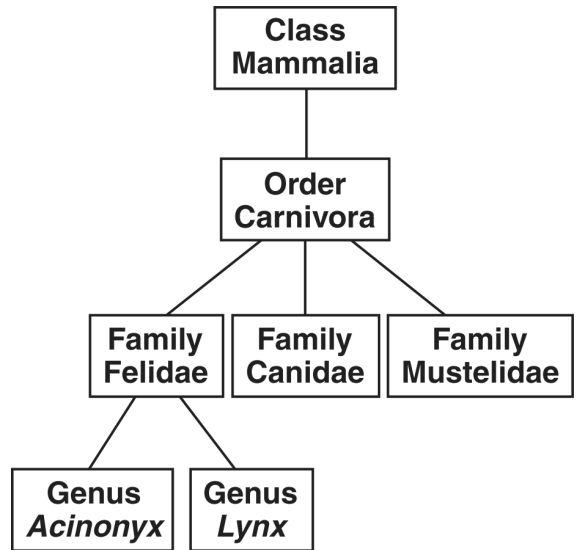
Classification of Cats

| House Cat | Lion | Tiger |
|-------------------|--------------|---------------|
| Animalia | Animalia | Animalia |
| Chordata | Chordata | Chordata |
| Mammalia | Mammalia | Mammalia |
| Carnivora | Carnivora | Carnivora |
| Felidae | Felidae | Felidae |
| <i>Felis</i> | <i>Felis</i> | <i>Felis</i> |
| <i>domesticus</i> | <i>leo</i> | <i>tigris</i> |

Which statement describes the relationship among the organisms in the chart?

- A. House cats and lions belong to the same species.
- B. House cats are more closely related to lions than to tigers.
- C. House cats, lions, and tigers belong to the same class and family.
- D. House cats and tigers belong to the same genus but to different orders.

27. The diagram shows the relationship within a classification system.



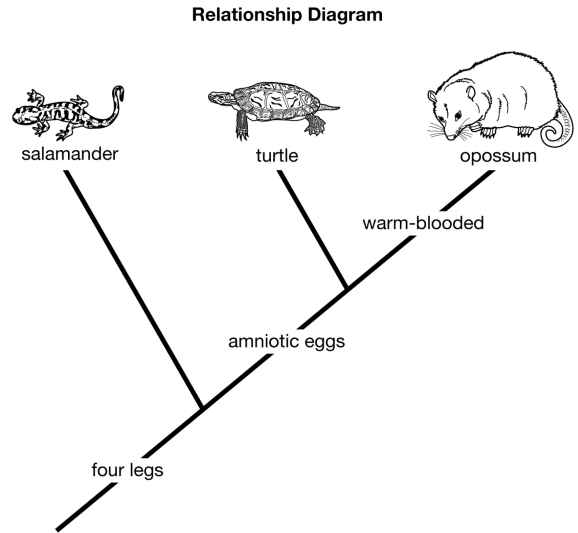
According to the current classification system, which group shown in the diagram above contains the greatest diversity of animals?

- A. Class Mammalia
 - B. Order Carnivora
 - C. Family Felidae
 - D. Genus Acinonyx
28. What is the *best* explanation for the continual changes in the classification system of organisms?
- A. All organisms struggle for existence and become extinct.
 - B. All organisms compete to be at the top of the food chain.
 - C. Technological advances have allowed scientists to better compare organisms.
 - D. More species have been discovered, but scientists have not analyzed all the data.

29. The scientific name of the gray wolf is *Canis lupus*, and the scientific name of the red wolf is *Canis rufus*. What must be true about these animals?

- A. They are classified in a different family.
- B. They are classified as a different species.
- C. They are classified as a different genus.

30. Use the relationship diagram below to answer the question.



Which statement most accurately describes a relationship between two animals in the relationship diagram?

- A. The turtle and opossum have amniotic eggs.
- B. The turtle and salamander have amniotic eggs.
- C. The turtle and opossum are warm-blooded.
- D. The turtle and salamander are warm-blooded.

Classification Questions 04/22/2015

- | | | | |
|---------|---|---------|---|
| 1. | | 21. | |
| Answer: | A | Answer: | B |
| 2. | | 22. | |
| Answer: | D | Answer: | D |
| 3. | | 23. | |
| Answer: | C | Answer: | B |
| 4. | | 24. | |
| Answer: | B | Answer: | A |
| 5. | | 25. | |
| Answer: | D | Answer: | B |
| 6. | | 26. | |
| Answer: | D | Answer: | C |
| 7. | | 27. | |
| Answer: | A | Answer: | A |
| 8. | | 28. | |
| Answer: | C | Answer: | C |
| 9. | | 29. | |
| Answer: | A | Answer: | B |
| 10. | | 30. | |
| Answer: | A | Answer: | A |
| 11. | | | |
| Answer: | C | | |
| 12. | | | |
| Answer: | C | | |
| 13. | | | |
| Answer: | D | | |
| 14. | | | |
| Answer: | A | | |
| 15. | | | |
| Answer: | D | | |
| 16. | | | |
| Answer: | A | | |
| 17. | | | |
| Answer: | C | | |
| 18. | | | |
| Answer: | D | | |
| 19. | | | |
| Answer: | B | | |
| 20. | | | |
| Answer: | B | | |