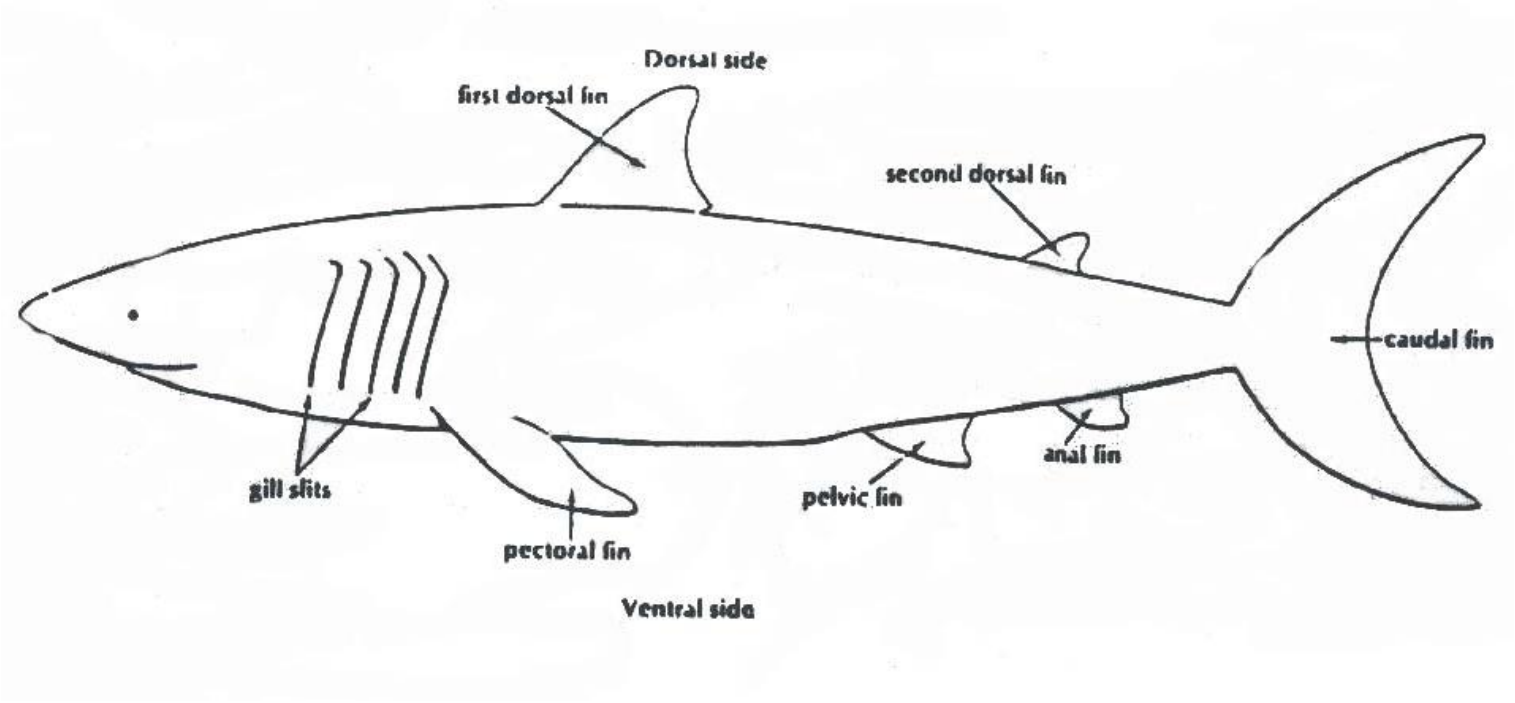
Shark Dichotomous Key NAME_____PER___

A classification system is a way of separating a large group of closely related organisms into smaller subgroups. With such a system, identification of an organism is easy. The scientific names of organisms are based on the classification systems of living organisms. To classify an organism, scientists often use a dichotomous key. A dichotomous key is a listing of specific characteristics, such as structure and behavior, in such a way that an organism can be identified through a process of elimination.

First, use the generic shark picture below to help identify different types of fins present on sharks. Then, use the key on the back to identify the 14 sharks pictured. Finally, answer the analysis questions listed to the right.



Analysis Questions- Complete AFTER you have identified the sharks on the back of this page.

1. What is a biological key and how is it used? _____

_____

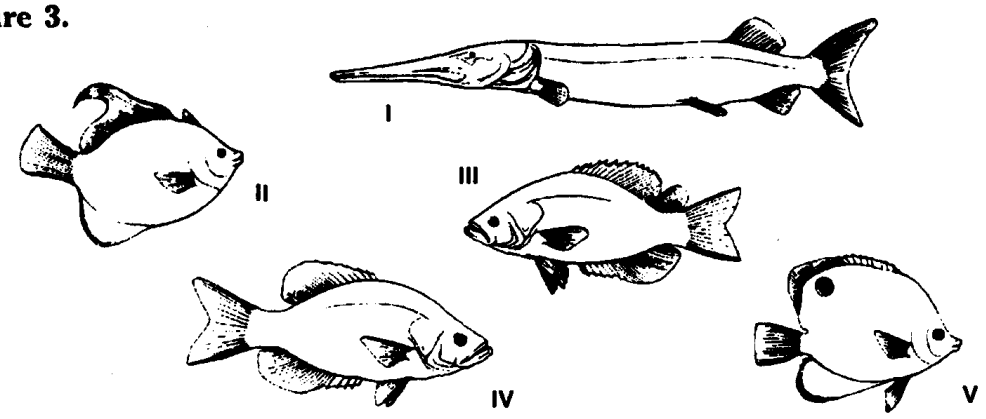
2. List four different characteristics that were used in the shark key. _____

_____

3 Prepare your own key for the five fish in Figure 3. Use the same format as on page 109. The family names to be used are the numbers I, II, III, IV, and V. Your key should correctly use traits that will lead to each fish family. To help you get started, the first statements are given. Statement 1 divides the five fish into two main groups, based on body shape. Next, choose another characteristic that will divide the fish not having a tubelike body into two groups. Continue to choose characteristics that will separate a group into smaller groups. Write your key in the space below.

1. A. Fish with long tubelike body
   B. Fish with body shape not tubelike

Figure 3.



Dichotomous Key to Shark Families

1. A. Body kite-like in shape (if viewed from the top) .....Go to statement 12
   B. Bay not kite-like in shape (if viewed from the top) .....Go to statement 2

2. A. Pelvic fin absent and nose saw-like .....Family Pristiophoridae
   B. Pelvic fin present ..... …..... Go to statement 3

3. A. Six gill slits present ....….Family Hexanchidae
   B. Five gill slits present ....…….Go to statement 4

4. A. Only one dorsal fin .....…..Family Scyliorhinidae
   B. Two dorsal fins ..... .Go to statement 5

5. A. Mouth at front of snout…….....……Family Rhinocodontidae
   B. Mouth onunderside of head .... Go to statement 6

6. A. Head expanded on side with eyes at end of expansion ….Family Sphymidae
   B. Head not expanded ....Go to statement 7

7. A. Top half of caudal fin about the same size as bottom half ....Family Isuridae
   B. Top half of caudal fin different in size than bottom half ..Go to statement 8

8. A. First dorsal fin very long, almost ½ total length of the body… Family Pseudotriakidae
   B. First dorsal fin regular length ……...……..Go to statement 9

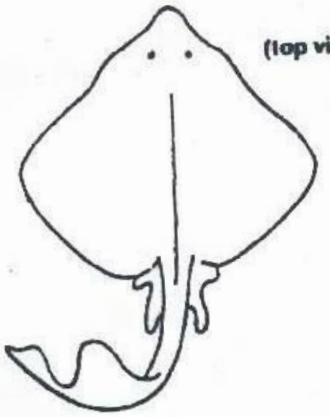
9. A. Caudal fin very long, almost as long as entire body ……...Family Alopiidae
   B. Caudal fin regular length .....…….Go to statement 10

10. A. A long needlelike point on end of nose .....Family Scapanorhynchidae
    B. Nose without long point .... Go to statement 11

11. A. Anal fin absent .....…….....Family Squalidae
    B. Anal fin present ....…….... Family Carcharhinidae

12. A. Small dorsal fin present near tip of rail .....Family Rajidae
    B. No dorsal fin present near tip of tail .....…Go to statement 13

13. A. Front of animal with two horn-like appendages ..... .Family Mobulidae
    B. No horn-like appendages……..... ...Family Dasyatidae



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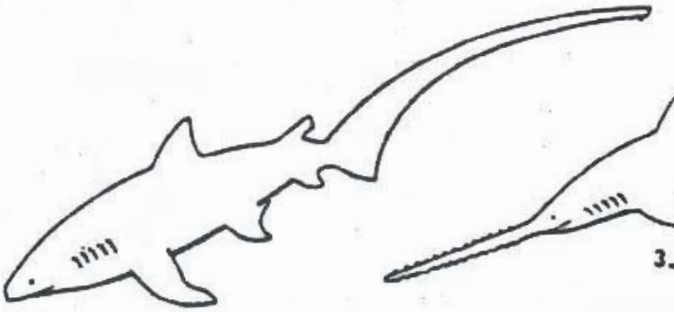

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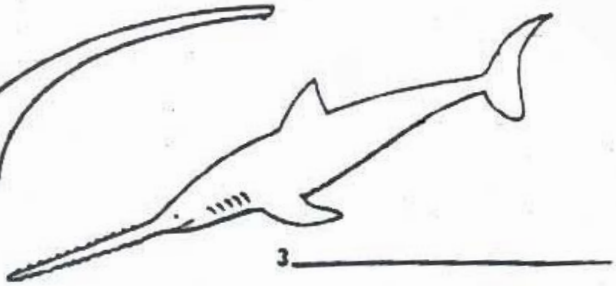

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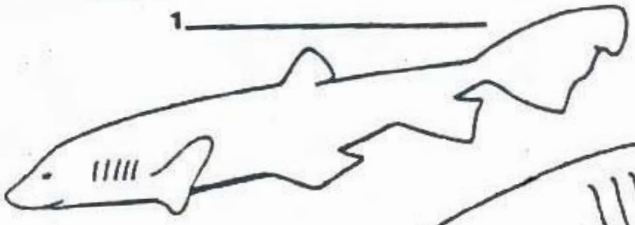

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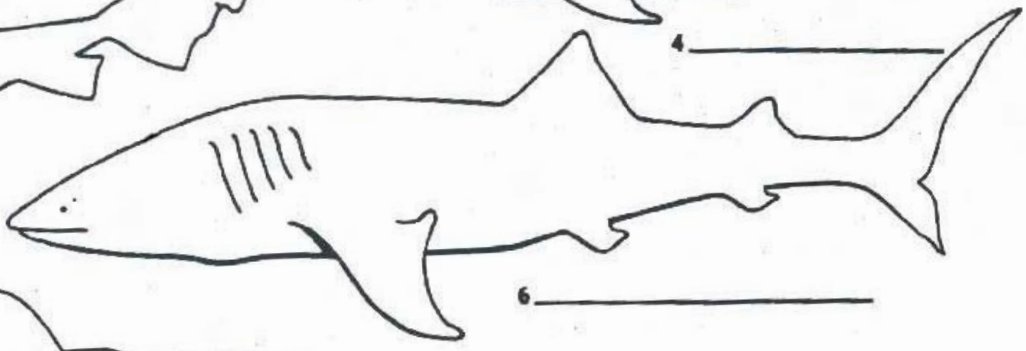

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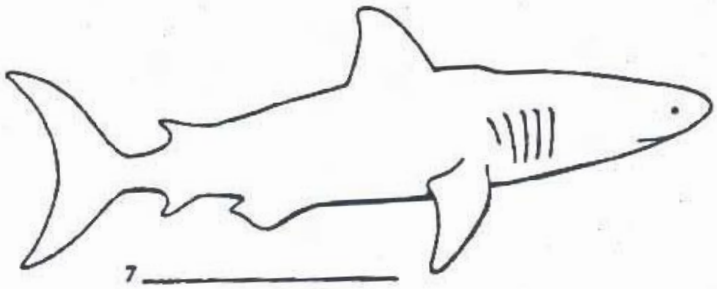

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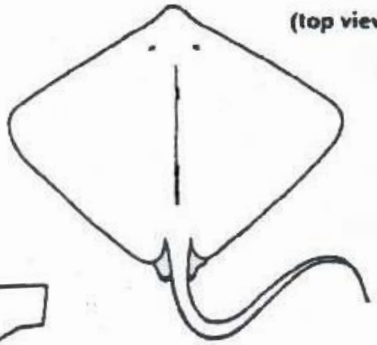

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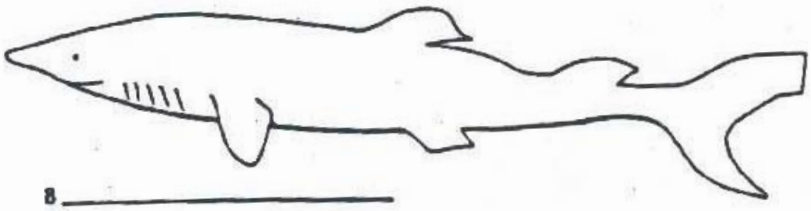

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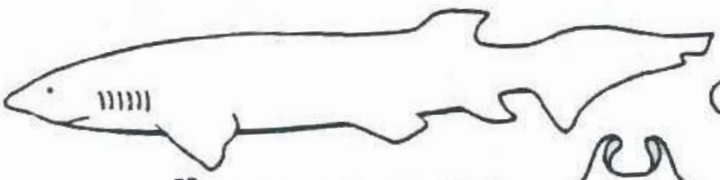

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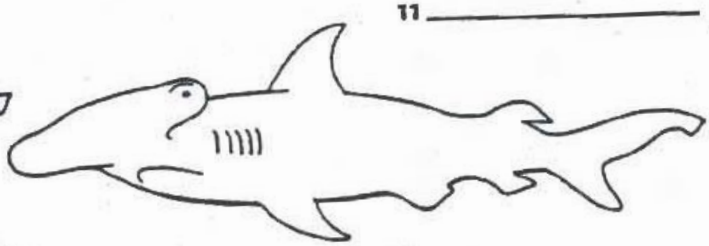

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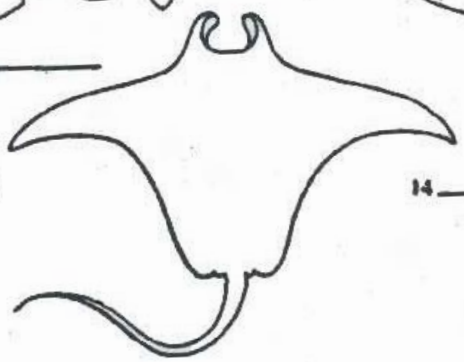

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