



Name: \_\_\_\_\_  
Marine Science

Date: \_\_\_\_\_  
Ms. Murphy & Mr. Krauz

## Bony Fish Review

1.) What is the scientific term for bony fish? \_\_\_\_\_

2.) Describe the body shape of a bony fish \_\_\_\_\_

3.) **Draw** a fish and **label** each of the structures below.

|            |              |              |          |
|------------|--------------|--------------|----------|
| Caudal Fin | Pectoral Fin | Pelvic Fin   | Anal Fin |
| Dorsal Fin | Operculum    | Lateral Line |          |
| Mouth      | Eyes         | Peduncle     |          |

4.) List the paired fins \_\_\_\_\_

5.) List the medial fins \_\_\_\_\_

6.) Give the **functions** of the following structures:

**Caudal Fin:** \_\_\_\_\_

**Pectoral Fin:** \_\_\_\_\_

**Pelvic Fin:** \_\_\_\_\_

**Anal Fin:** \_\_\_\_\_

**Dorsal Fin:** \_\_\_\_\_

7.) **Draw** and **label** the **four** shapes of bony fish caudal fins we learned about in class.

8.) Would the fish to the right be a fast or slow swimmer? **How** can you tell?

\_\_\_\_\_



9.) Would the fish to the right be a fast or slow swimmer? **How** can you tell?

\_\_\_\_\_



10.) Determine the **aspect ratio** of a fish with a **fin height of 6 cm** and a **surface area of 12 cm**.

11.) Is this fish faster or slower than a fish with an aspect ratio of 8. \_\_\_\_\_

12.) **Define** the term **Homocercal**.

\_\_\_\_\_

13.) **Draw** a **Homocercal** caudal fin.

14.) Give two **functions** of the lateral line.

② \_\_\_\_\_  
② \_\_\_\_\_

15.) Give two **functions** of the operculum

② \_\_\_\_\_  
② \_\_\_\_\_

16.) **Explain** how a fish's eye is **different** from yours. Give one reason **why** a fish's eye is different.

17.) **Draw** a diagram of the gills. Be sure to **include the following** structures in your diagram: gill rakers, gill arch, gill filaments.

18.) Give the **functions** of the following gill parts.

|                       |  |
|-----------------------|--|
| <b>Gill Rakers</b>    |  |
| <b>Gill Arch</b>      |  |
| <b>Gill Filaments</b> |  |

19.) What is the **difference** between hemoglobin and myoglobin?

20.) **What** is counter-current flow? **Why** is it so important to the fish?

21.) **Draw** a fish heart and indicate the direction of blood flow.

22.) **Define** the term **ectothermic**.

23.) **Explain** how a fish's **swim bladder** works. Be sure to use the term **density** in your answer.

24.) List **4** fish with **no** swim bladder. **Why** do these fish not need a swim bladder?

25.) **Define** the following terms related to fish **reproduction**.

🌀 **Courtship:**

🌀 **Copulation:**

🌀 **Spawning:**

26.) What does the term **hermaphroditism** mean?

27.) **Explain where** in the ocean most hermaphroditic fish live and **why**.

28.) What is **sex reversal**? **Name** one fish that does sex reversal and explain **when** it happens.