

**SECTION 38-1 REVIEW**

# PHYLUM ARTHROPODA

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**VOCABULARY REVIEW** Define the following terms.

1. arthropod \_\_\_\_\_  
\_\_\_\_\_
2. compound eye \_\_\_\_\_  
\_\_\_\_\_
3. tagma \_\_\_\_\_  
\_\_\_\_\_
4. chelicerae \_\_\_\_\_  
\_\_\_\_\_

**MULTIPLE CHOICE** Write the correct letter in the blank.

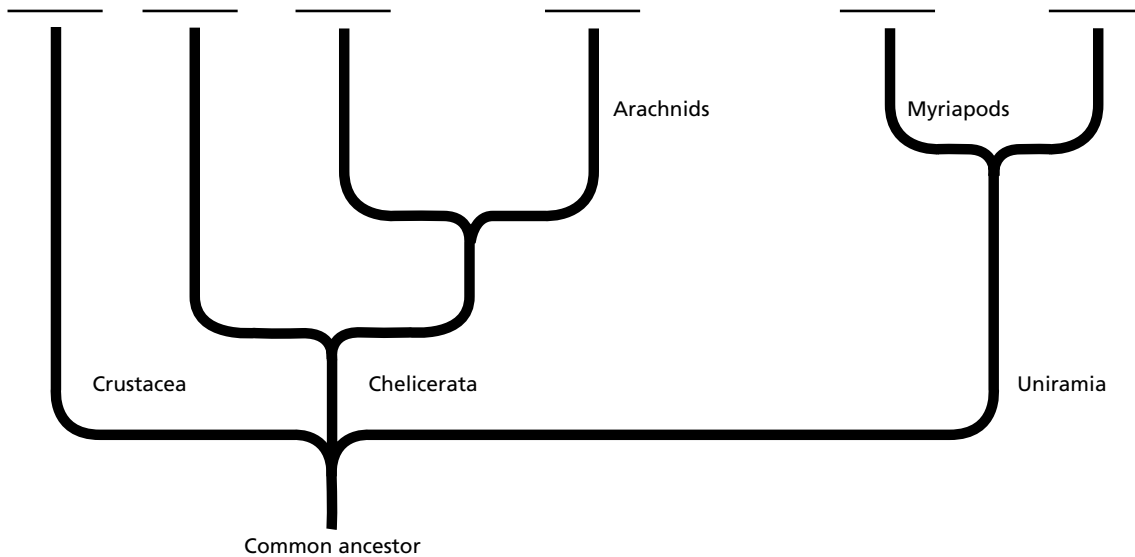
- \_\_\_\_\_ 1. An arthropod's exoskeleton performs all of the following functions except
- |                                |                                    |
|--------------------------------|------------------------------------|
| a. producing gametes.          | c. supporting the animal's weight. |
| b. protecting internal organs. | d. helping prevent desiccation.    |
- \_\_\_\_\_ 2. One feature that arthropods share with annelids is
- |                                 |                             |
|---------------------------------|-----------------------------|
| a. a closed circulatory system. | c. a ventral nerve cord.    |
| b. jointed appendages.          | d. a lack of cephalization. |
- \_\_\_\_\_ 3. An arthropod sheds its old exoskeleton when
- |  |
|--|
| a. the old exoskeleton wears out.                        |
| b. the new exoskeleton exerts pressure on the epidermis. |
| c. the animal is 1–2 years old.                          |
| d. a hormone is produced that induces molting.           |
- \_\_\_\_\_ 4. Ancestral arthropods probably had
- |  |
|--|
| a. no coelom.  |
| b. one pair of appendages on every segment.                |
| c. bodies consisting of a few, highly specialized tagmata. |
| d. endoskeletons.  |
- \_\_\_\_\_ 5. The subphylum Crustacea includes
- |             |             |           |             |
|-------------|-------------|-----------|-------------|
| a. insects. | b. spiders. | c. ticks. | d. shrimps. |
|-------------|-------------|-----------|-------------|

**SHORT ANSWER** Answer the questions in the space provided.

1. What substance makes an arthropod's exoskeleton repel water, and where is this substance located?  
\_\_\_\_\_
2. What substance makes some arthropods' exoskeletons hard, and where is this substance located?  
\_\_\_\_\_
3. List two examples of arthropod appendages. \_\_\_\_\_
4. Identify three ways that arthropods show cephalization. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. **Critical Thinking** The extinct animal *Marella* is thought to have been a distant ancestor of some living arthropods. *Marella* had branched legs and unbranched antennae. Why is it difficult to place *Marella* in any of the subphyla of living arthropods? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**STRUCTURES AND FUNCTIONS** The diagram below shows a phylogenetic tree of living arthropods. In the blank spaces at the top of the diagram, write the names of the animals that belong on each branch of the tree. Some spaces will have more than one name. Choose the names from the following list:

- |           |        |                |            |
|-----------|--------|----------------|------------|
| spider    | mite   | horseshoe crab | sea spider |
| shrimp    | insect | millipede      | scorpion   |
| centipede |        |                |            |



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