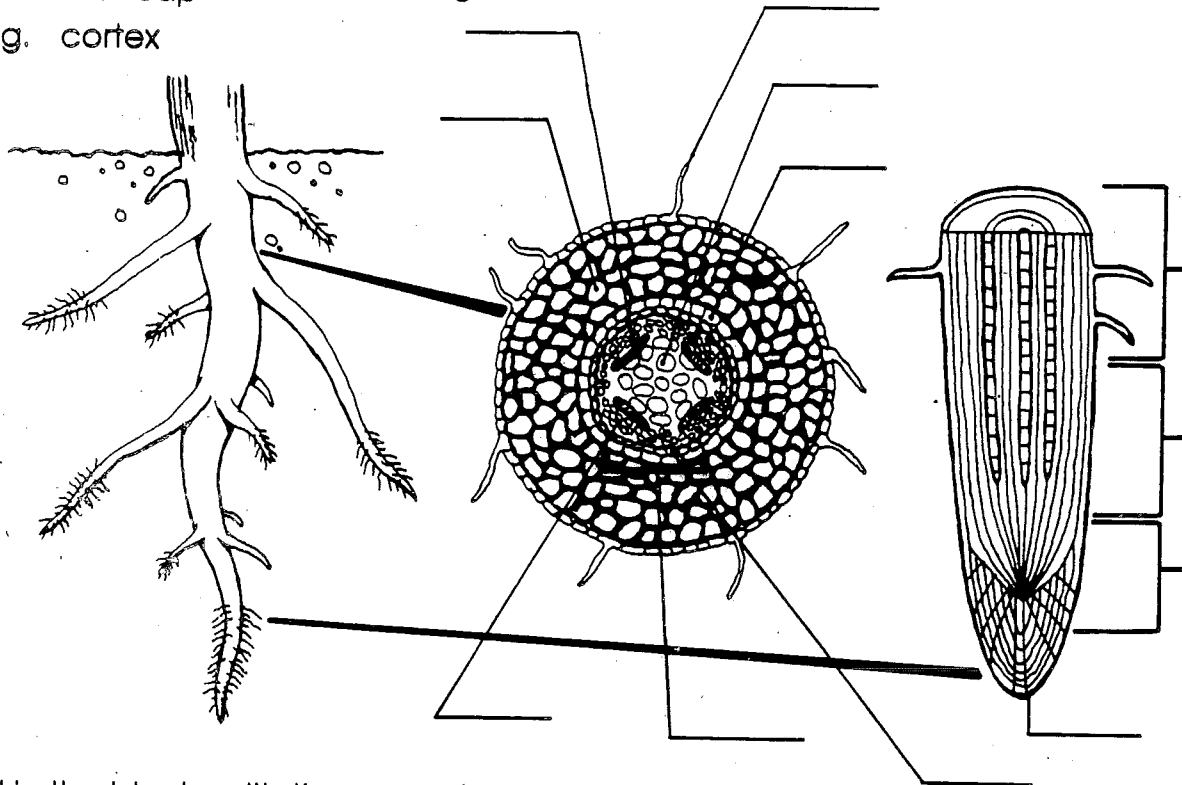


STRUCTURE OF A ROOT

Name _____

Label the following parts on the diagrams of a cross-section and longitudinal section of a root below.

- | | |
|----------------------|----------------------------------|
| a. xylem | h. pericycle |
| b. phloem | i. cambium |
| c. vascular cylinder | j. region of differentiation |
| d. epidermis | k. region of elongation |
| e. foot hair | l. region of meristematic growth |
| f. root cap | |
| g. cortex | |



Fill in the blanks with the correct answers.

The end of the root that absorbs minerals and _____ is the _____.

The root tip is protected by several layers of cells called the _____.

In the region of _____, cells mature and become specialized in function. Some cells in the outer layer develop _____. These _____ are elongated cells that increase the surface area of the root to maximize absorption of _____ and minerals from the _____.

The _____ and vascular cylinder are separated by the _____.

In the vascular cylinder, the xylem and _____ are separated by the _____.

CROSS SECTION OF A LEAF

Name _____

Label the following parts of the leaf in the diagram below. Give the purpose/function of each part.

- a. lower epidermis _____
- b. upper epidermis _____
- c. palisade layer _____
- d. cuticle _____
- e. stoma _____
- f. guard cells _____
- g. vein (fibrovascular bundle) _____
- h. spongy layer _____
- i. air space _____
- j. xylem _____
- k. phloem _____
- l. chloroplasts _____
- m. mesophyll _____

