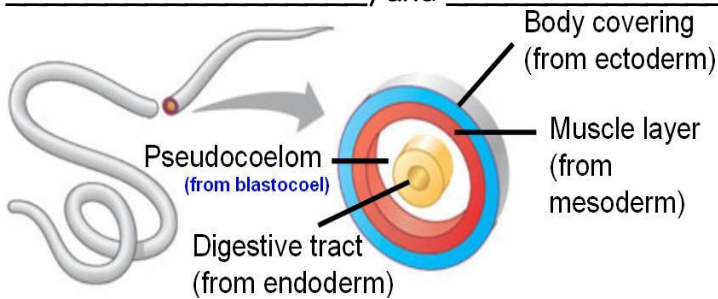# Phylum Nematoda – Roundworms

Nematodes

- Roundworms _____ _____

- Can be free living or parasitic

- Most numerous of all _____ animals

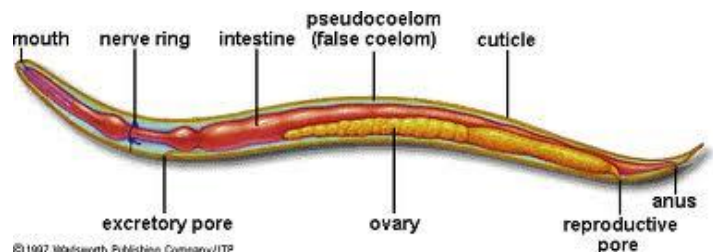- A rotting apple can have up to _____ roundworms

✑ Organization

- Cylindrical body _____ at both ends

- Unsegmented

- Bilateral Symmetry

- The nematode develops from _____ layers: _____ _____, and _____

Body covering
(from ectoderm)

Muscle layer
(from mesoderm)

Pseudocoelom
(from blastocoel)

Digestive tract
(from endoderm)

- First phylum to have a _____

  - Pseudocoelem - fluid-filled cavity that acts as a hydrostatic skeleton to maintain body shape, _____ nutrients, and hold the major body organs

✑ Digestion

- All roundworms have a long tube-shaped digestive tract with openings at _____ _____ (one way digestive system)

  - _____ digestive tract made up of mouth, pharynx, intestine, & anus

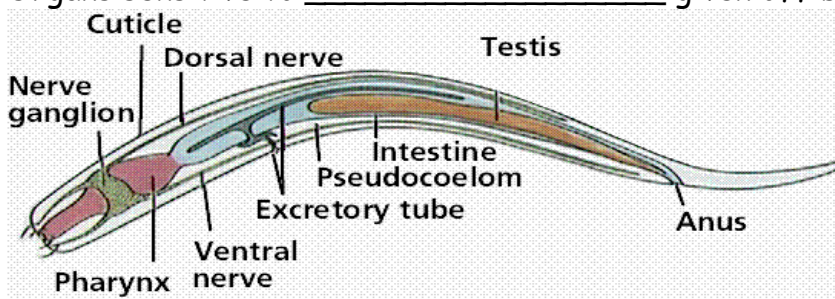 - Food _____ through the mouth and undigested materials _____ through the anus

mouth   nerve ring   intestine   pseudocoelom (false coelom)   cuticle

excretory pore   ovary   reproductive pore   anus

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✇Circulation/Respiration/Excretion

* _____ circulatory or respiratory system; Rely on DIFFUSION for movement of nutrients and gases

* Cellular wastes _____ through body to excretory pore in body wall
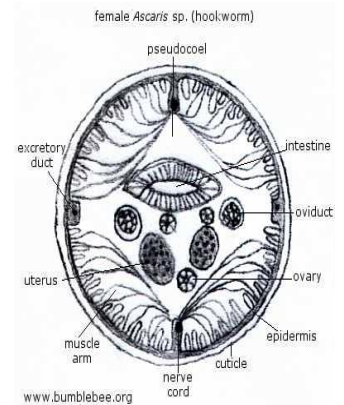
✇Nervous System

* _____ (groups of nerve cells) in the anterior "head" region

* _____ run from "head" down the length of body

  * These transmit sensory information and control movement

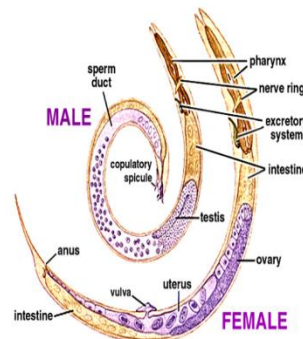* Organs sensitive to _____ given off by predators/prey

✇Locomotion (motility)

* **Pseudocoelem** is a _____ _____ body cavity that acts as a **hydrostatic skeleton**

  * enabling the nematode to _____ due to the pressure of the fluid filled cavity acting against the _____ _____ contracting below it

✇Reproduction

* Nematodes reproduce _____

  * Male _____ Female organisms

  * Some are hermaphroditic

* Fertilization occurs in the female organism

  * Fertilized eggs can _____ in the nematode or outside the nematode

Ecological Role

- Found in soil, water, and inside other organisms
- Functions:
  - _____ the soil
  - _____ dead organisms
  - population check/balance (parasites)

Human Disorders

- Trichinosis – adults live and mate in host intestines
  - Larvae move through bloodstream then burrow into organs and tissue (very painful)
  - Larvae inactive until host is eaten by another animal
- Elephantiasis – live in blood and lymph vessels
  - Transmitted from host to host by mosquitos
  - Severe infections lymph vessels blocked by large amounts of worms; causes extreme swelling of body parts