

Post Gymn/Angio Test

1. In your own words, define:

- | | |
|-----------------|-----------------------|
| a. Ectoderm | h. Omnivore |
| b. Endoderm | i. Symmetry |
| c. Mesoderm | j. Asymmetry |
| d. Invertebrate | k. Bilateral symmetry |
| e. Vertebrate | l. Radial symmetry |
| f. Carnivore | m. Cephalization |
| g. Herbivore | n. notochord |

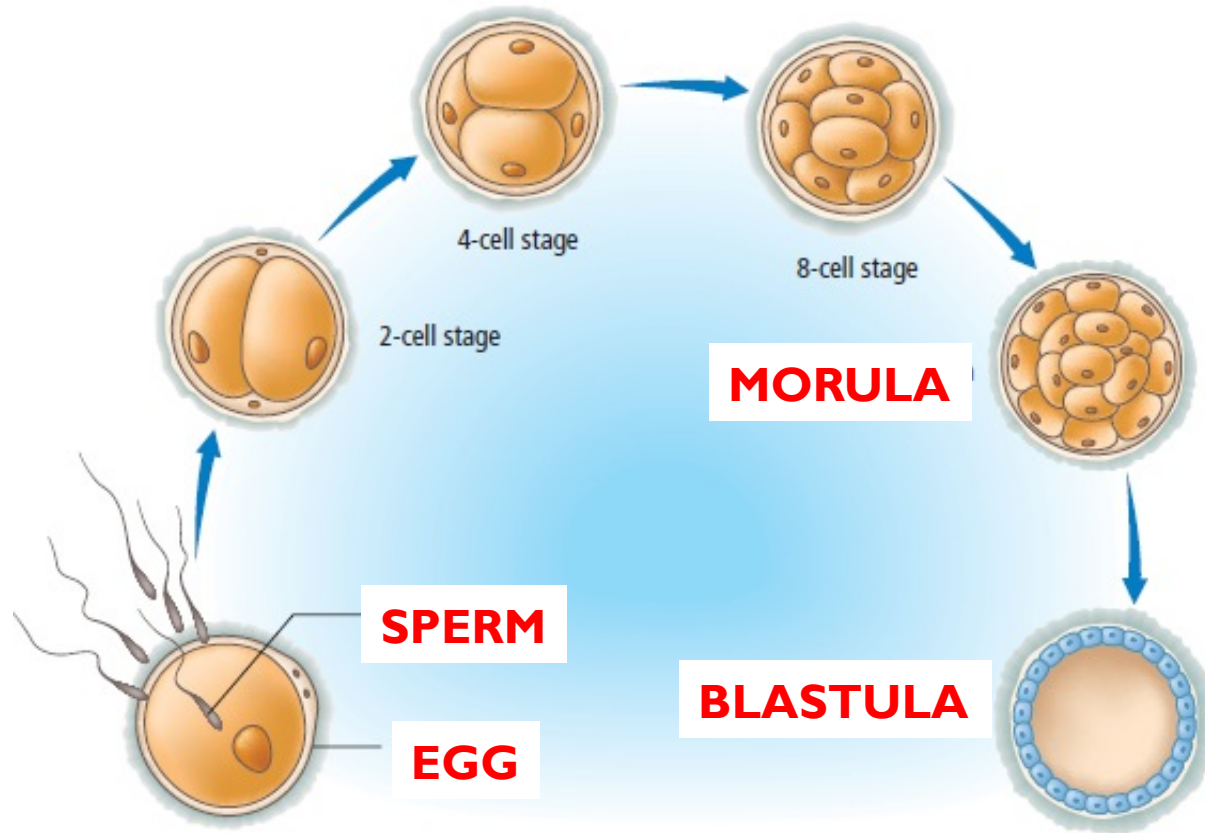
2. List the characteristics of Kingdom Animalia

3. Describe the different types of body cavities including explaining (coelom, coelomate, acoelomate, pseudocoelomate, mesodermal, peritoneum)

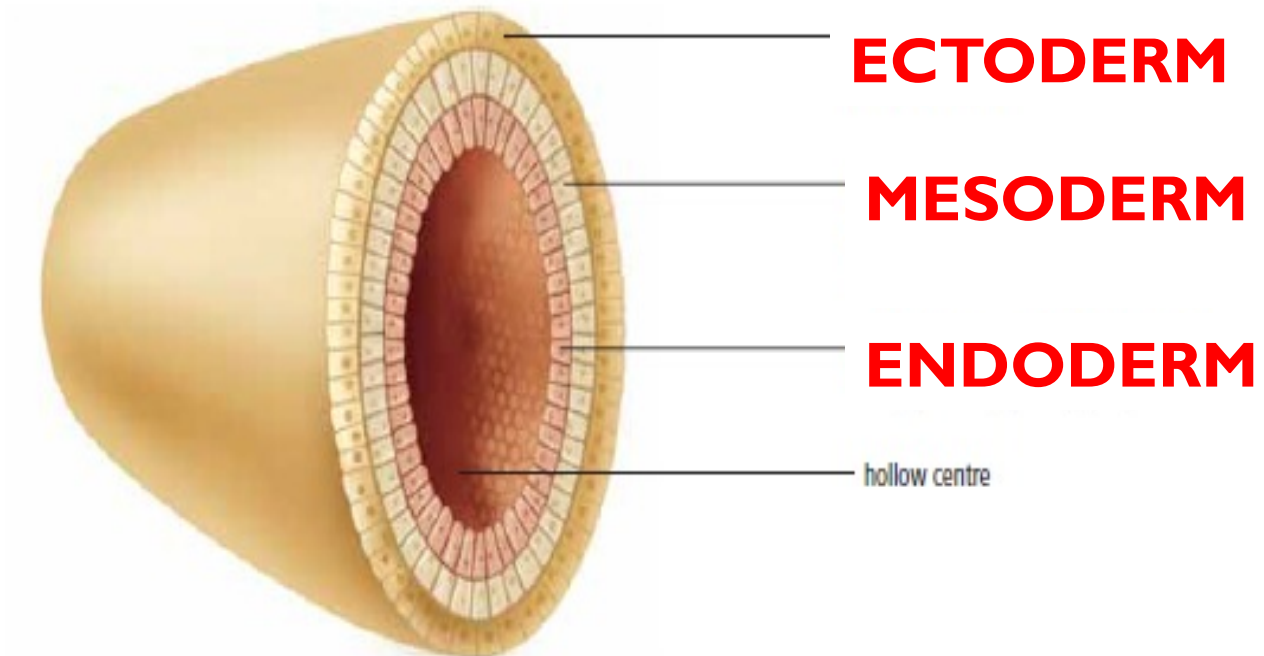
ANSWERS:

- a. **Ectoderm** – the layer of the gastrula that will form the outer part of the body
- b. **Endoderm** – the layer of the gastrula that will form the inside of the body
- c. **Mesoderm** – the layer of the gastrula that will form muscles, reproductive organs, kidneys, blood vessels and bone.

Embryonic Development



Gastrula Development



ANSWERS:

- d. **Invertebrate** – animal with no backbone
- e. **Vertebrate** – animals with notochord (at some stage of their life)
- f. **Carnivore** – animals that eat other animals
- g. **Herbivore** – animals that only eat plants
- h. **Omnivore** – animals that eat both plant and animals
- i. **Symmetry** – refers to the pattern of body plans in animals and is the balanced distribution of duplicate body parts
- j. **Asymmetry** – lacking balanced distribution

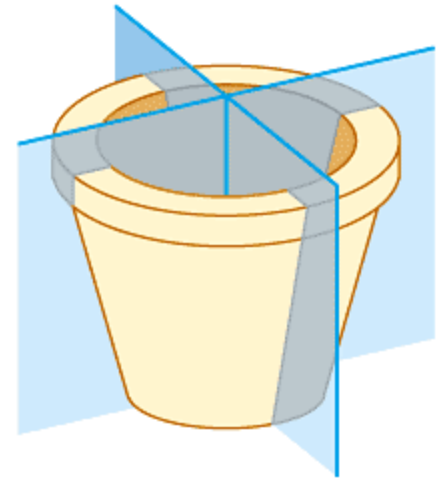
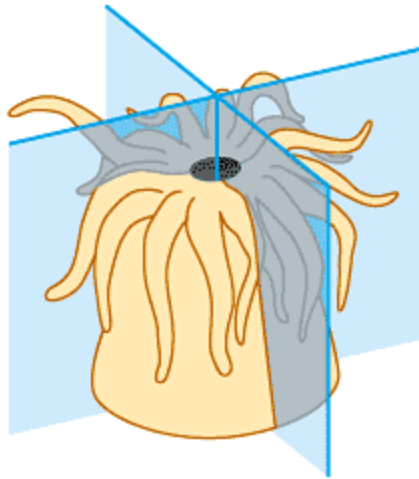
k. **Bilateral symmetry** – right & left halves are mirror images

l. **Radial symmetry** – symmetry around a central axis

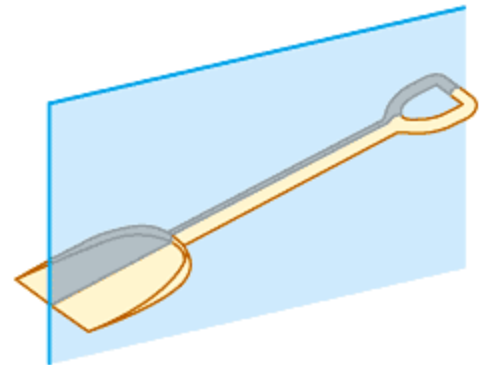
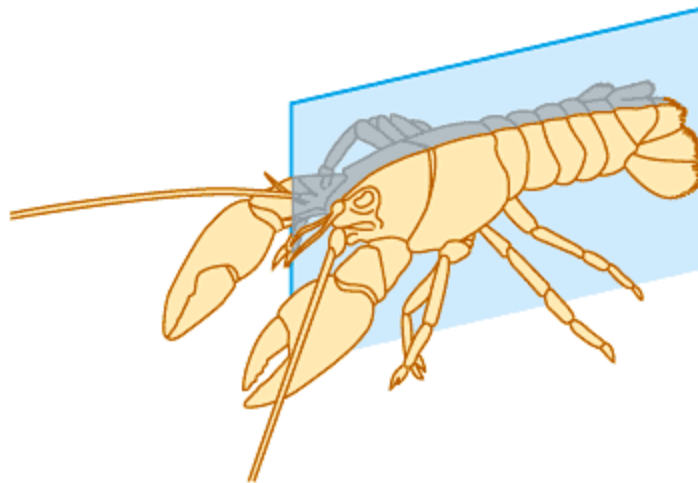
m. **Cephalization** – concentration of nerve tissue at the anterior end of the animal's body (e.g. brain)

n. **Notochord** – flexible rod-shaped body that runs lengthwise along the dorsal surface beneath the nerve cord (turns into vertebrae column in most vertebrates)

Symmetry



(a) Radial symmetry



(b) Bilateral symmetry

2. K. Animalia characteristics

- Eukaryotic
- All multicellular
- All heterotrophs
- Most reproduce sexually, some asexually

Kingdom Animalia

- Characteristics:

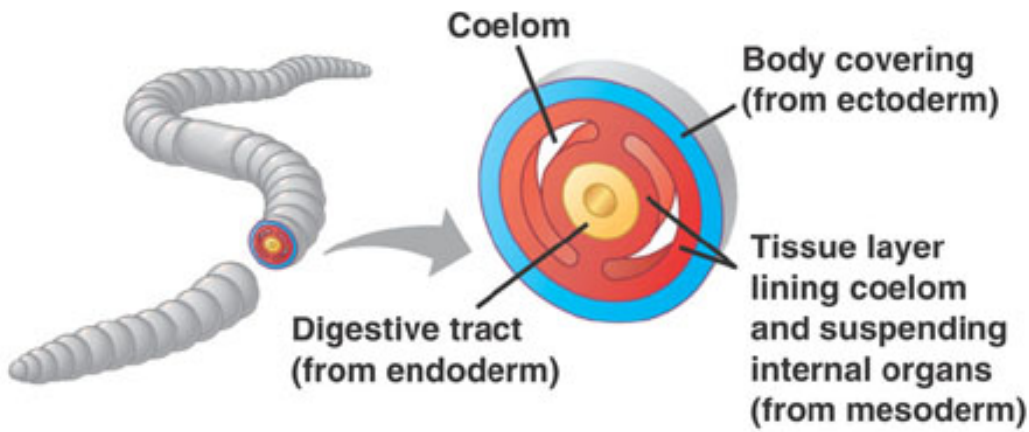
- Eukaryotics
- All multicellular
- All heterotrophic
- Most reproduce sexually, some asexually



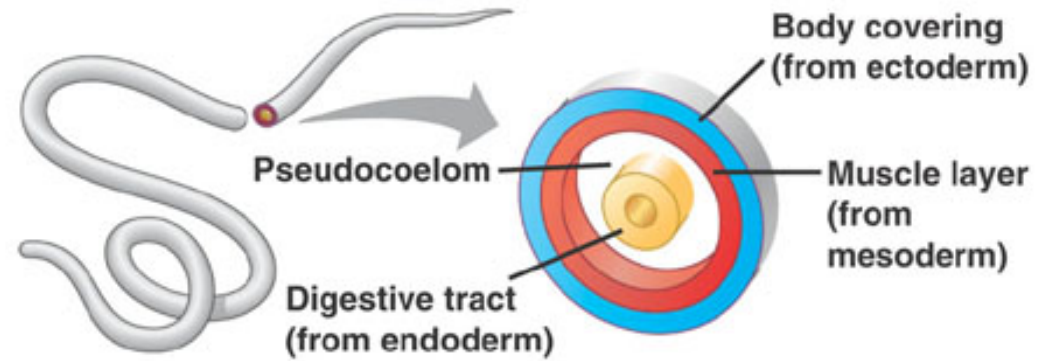
3. Body cavities:

- coelom – a body cavity located between the gut and the body wall
- Acoelomate – lacks a body cavity
- Pseudocoelomate – “false” body cavity between ectoderm and endoderm
 - A fluid filled cavity, has NO mesoderm cells
- Mesodermal – between ectoderm and endoderm. Cells line the body cavity
- Peritoneum – a membrane that lines the body cavity, gut and covers internal organs
- Coelomate – true body cavity lined with a peritoneum

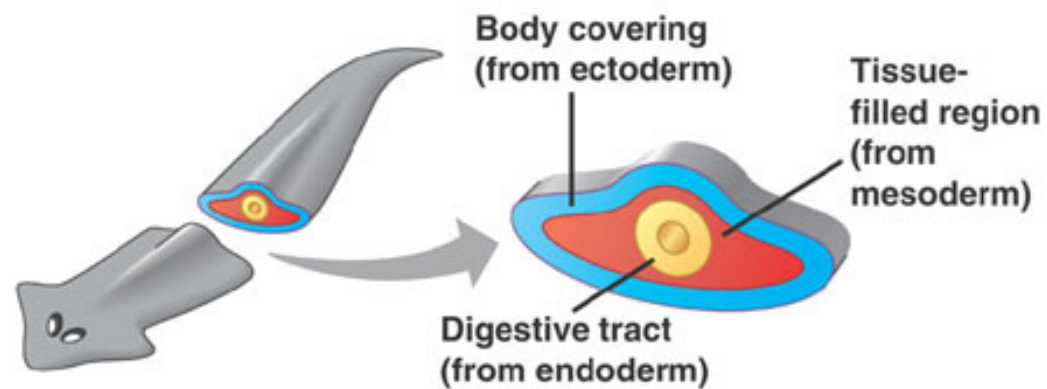
Body Cavities



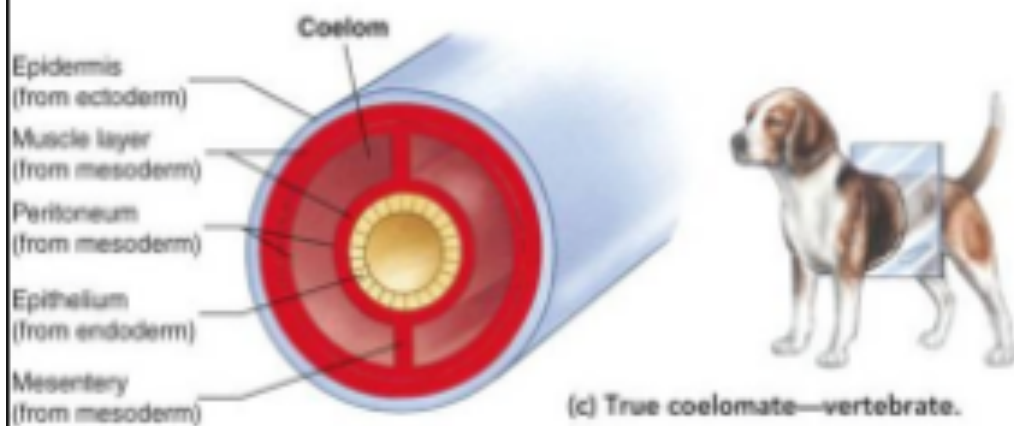
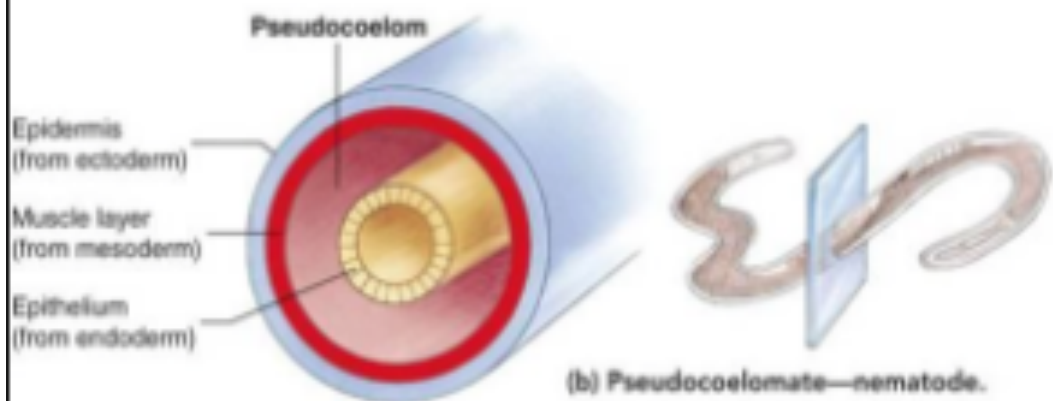
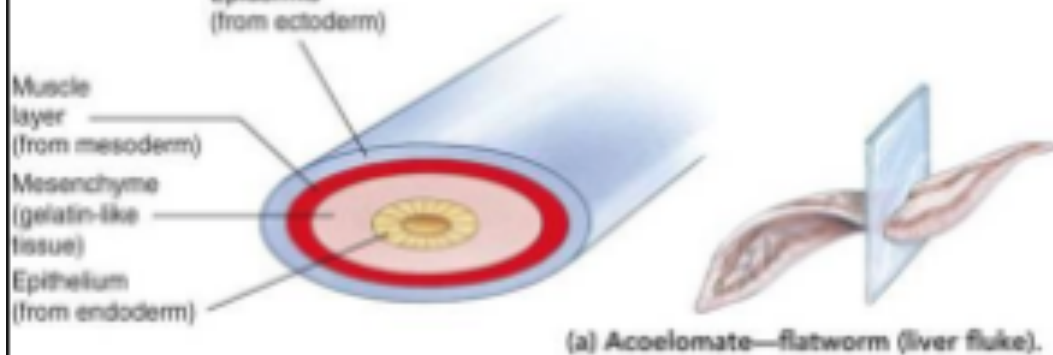
(a) Coelomate



(b) Pseudocoelomate



(c) Acoelomate



Term	Definition	Example
Superior	Higher	The knee is superior to the foot
Inferior	Lower	The foot is inferior to the knee
Cephalic	Head	The neck is cephalic to the breastbone
Caudal	Tail	The breastbone is caudal to the neck
Medial	Towards the midline of the body	The nose is medial to the ears
Lateral	The sides/away from the midline	The ears are lateral to the nose
Anterior	Front	The navel is anterior to the spine
Posterior	Back	The spine is posterior to the navel
Ventral	Belly	The navel is ventral to the spine
Dorsal	Back	The spine is dorsal to the navel
Proximal	Closer to the point of attachment to the body	The shoulder is proximal to the elbow
Distal	Farther from the point of attachment to the body	The elbow is distal to the shoulder
Superficial	Close to the surface	The skin is superficial to the bone
Deep	Further within the body	The bone is deep to the skin