Instructors may assign a portion of the Review Sheet questions using Mastering A&P™

EXERCISE 9

REVIEW SHEET
The Axial Skeleton

Name Brianna Gorham Lab Time/Date _____

The Skull

1. First, match the bone names in column B with the descriptions in column A (the items in column B may be used more than once). Then, circle the bones in column B that are cranial bones.

Column A

B 1. forms the anterior cranium

O 2. cheekbone

H 3. bridge of nose

J 4. posterior bones of the hard palate

K 5. much of the lateral and superior cranium

L 6. single, irregular, bat-shaped bone forming part of the cranial base

E 7. tiny bones bearing tear ducts

G 8. anterior part of hard palate

A 9. superior and middle nasal conchae form from its projections

M 10. site of mastoid process

I 11. has condyles that articulate with the atlas

C 12. small U-shaped bone in neck, where many tongue muscles attach

M 13. organ of hearing found here

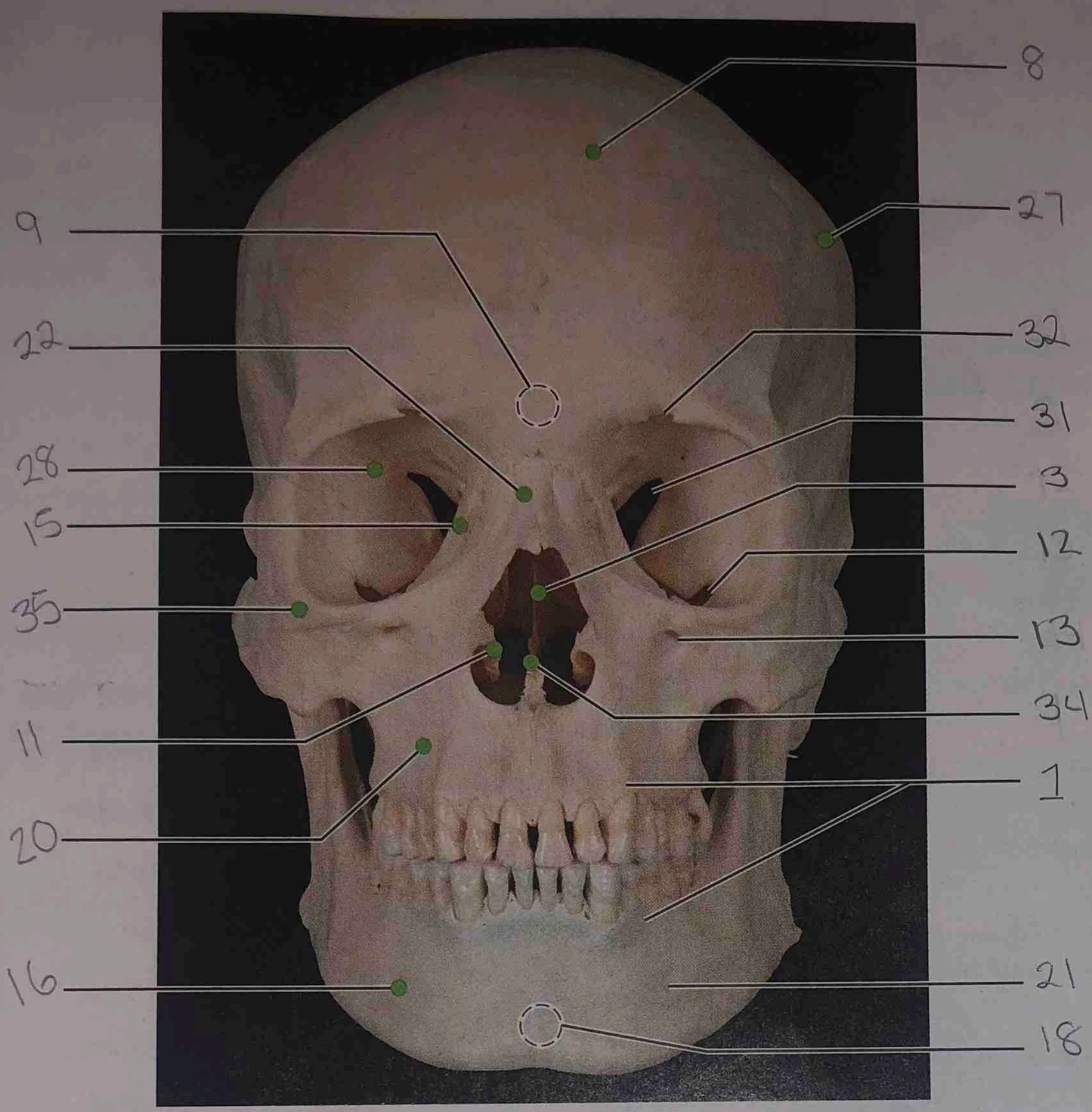
N, _____ 14. two bones that form the nasal septum

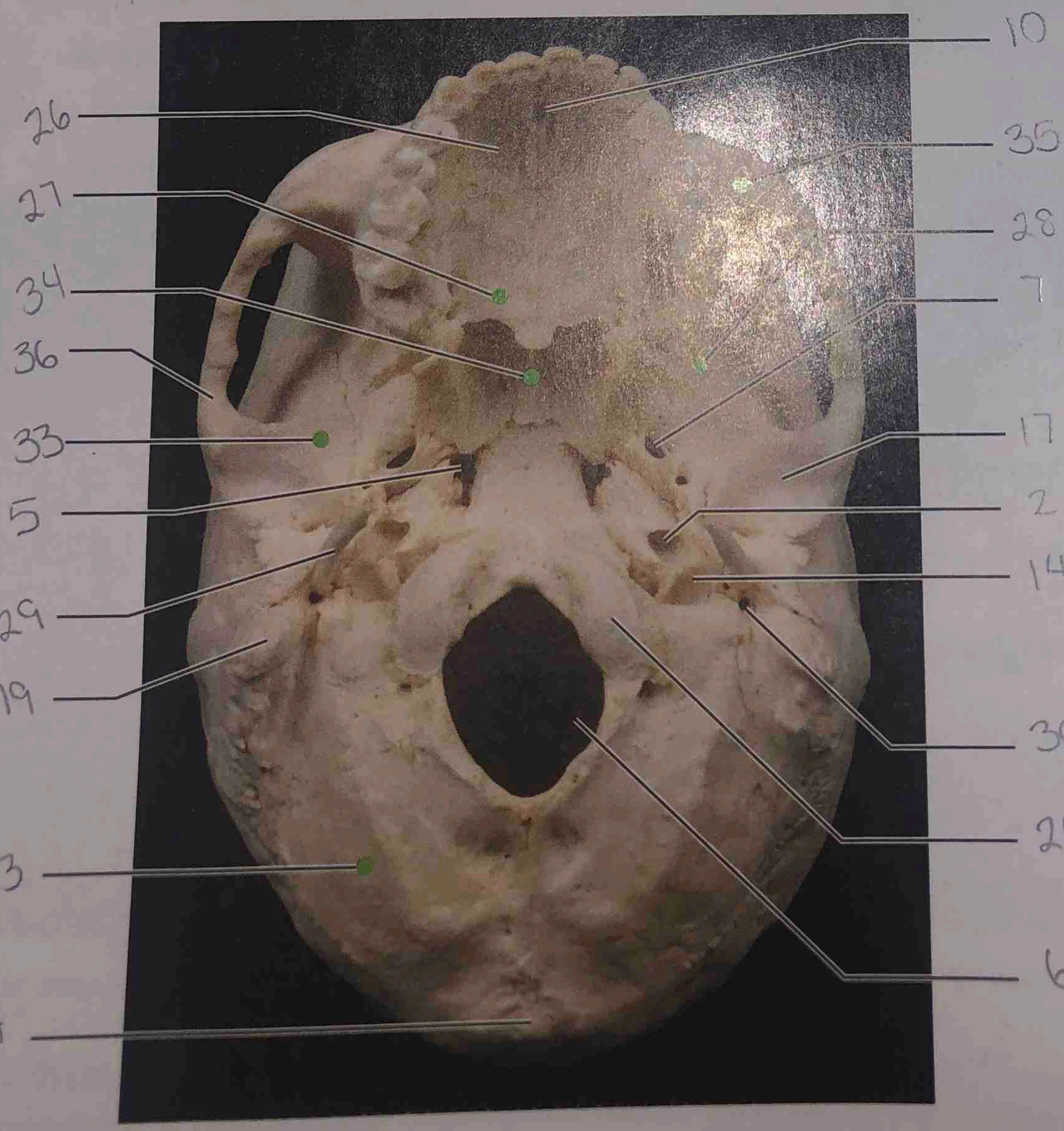
D 15. forms the most inferior turbinate

Column B

a. ethmoid
b. frontal
c. hyoid
d. inferior nasal concha
e. lacrimal
f. mandible
g. maxilla
h. nasal
i. occipital
j. palatine
k. parietal
l. sphenoid
m. temporal
n. vomer
o. zygomatic

2. Using choices from the numbered key to the right, identify all bones and bone markings provided with various leader lines in the two following photographs. A colored dot at the end of a leader line indicates a bone. Leader lines without a colored dot indicate bone markings. Note that vomer, sphenoid bone, and zygomatic bone will each be labeled twice.





Key:

1. alvelolar processes
2. carotid canal
3. ethmoid bone (perpendicular plate)
4. external occipital protuberance
5. foramen lacerum
6. foramen magnum
7. foramen ovale
8. frontal bone
9. glabella
10. incisive fossa
11. inferior nasal concha
12. inferior orbital fissure
13. infraorbital foramen
14. jugular foramen
15. lacrimal bone
16. mandible
17. mandibular fossa
18. mandibular symphysis
19. mastoid process
20. maxilla
21. mental foramen
22. nasal bone
23. occipital bone
24. occipital condyle
25. palatine bone
26. palatine process of maxilla
27. parietal bone
28. sphenoid bone
29. styloid process
30. stylomastoid foramen
31. superior orbital fissure
32. supraorbital foramen
33. temporal bone
34. vomer
35. zygomatic bone
36. zygomatic process

3. Define *suture*. A stich or row of stitches holding together the edges of a wound or surgical incision.

4. With one exception, the skull bones are joined by sutures. Name the exception.

Joints between the mandible and temporal bones

5. What bones are connected by the lambdoid suture?

The occipital and parietal

What bones are connected by the squamous suture?

The pariental bones

6. Name the eight bones of the cranium. (Remember to include left and right.)

Frontal, Occiptal, Right Parientel, Right Temporal, Sphenoid, Ethmoid, Left Parietal, Left Temporal

7. List the bones that have sinuses, and give two possible functions of the sinuses.

The Frontal, Maxilla, Ethmoid, Sphenoid are the bones that have sinuses

1) The lighten the facial bones

2) Act as resonance speech chamber

8. What is the bony orbit? Bony orbit is the socket for the eye.

What bones contribute to the formation of the orbit? Ethmoid, Lacrimal, Frontal, Sphenoid, Zygomatic, Maxillary, Palatine

9. Why can the sphenoid bone be called the keystone bone of the cranium? It connects to all of the other Cranial bones.

The Vertebral Column

10. The distinguishing characteristics of the vertebrae composing the vertebral column are noted below. Correctly identify each described structure by choosing a response from the key.

Key:
a. atlas
b. axis
c. cervical vertebra—typical
d. coccyx
e. lumbar vertebra
f. sacrum
g. thoracic vertebra

Cervical-Vertebra 1. vertebra type containing foramina in the transverse processes, through which the vertebral arteries ascend to reach the brain

Axis 2. dens here provides a pivot for rotation of the first cervical vertebra (C_1)

Thoracic Vertebra 3. transverse processes faceted for articulation with ribs; spinous process pointing sharply downward

Sacrum 4. composite bone; articulates with the hip bone laterally

Lumbar Vertebra 5. massive vertebra; weight-sustaining

Coccyx 6. "tail bone" fused vertebrae

Atlas 7. supports the head; allows a rocking motion in conjunction with the occipital condyles

11. Using the key, correctly identify the vertebral parts/areas described below. (More than one choice may apply in some cases.) Also use the key letters to correctly identify the vertebral areas in the diagram.

Key:
a. body
b. intervertebral foramina
c. lamina
d. pedicle
e. spinous process
f. superior articular facet
g. transverse process
h. vertebral arch
i. vertebral foramen

T 1. cavity enclosing the spinal cord

A 2. weight-bearing portion of the vertebra

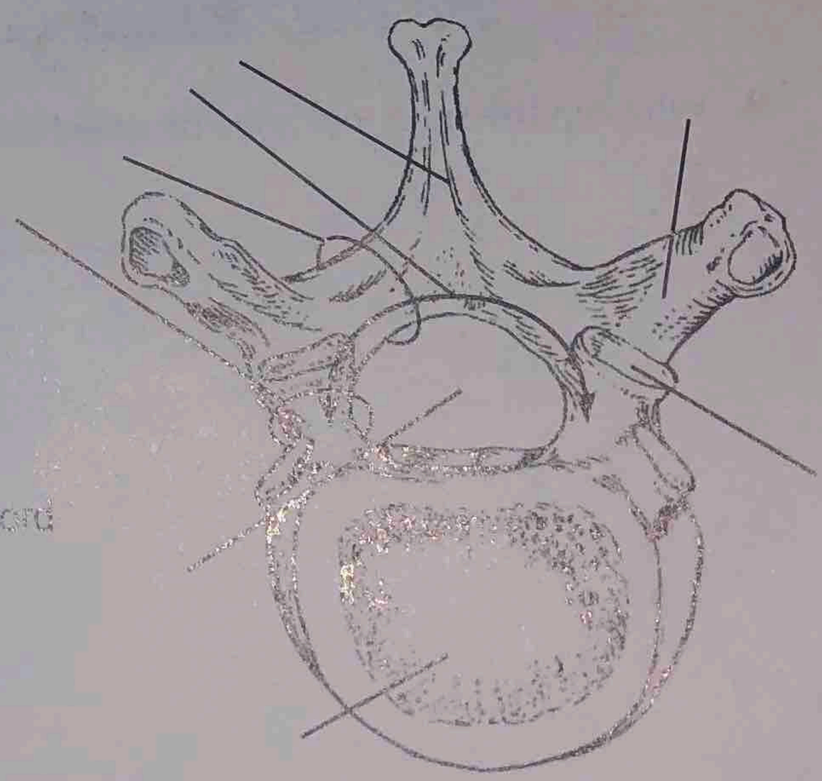
E, G 3. provide levers against which muscles pull

A, G 4. provide an articulation point for the ribs

B 5. openings providing for exit of spinal nerves

A, H 6. structures that form an enclosure for the spinal cord

D, E C 7. structures that form the vertebral arch



12. Describe how a spinal nerve exits from the vertebral column. They exists through the ventral root then the ventral horn

13. Name two factors/structures that permit flexibility of the vertebral column.

Discs and S shaped

14. What kind of tissue makes up the intervertebral discs? Fibrocartilage

15. What is a herniated disc? Compress on the Spinal Cord

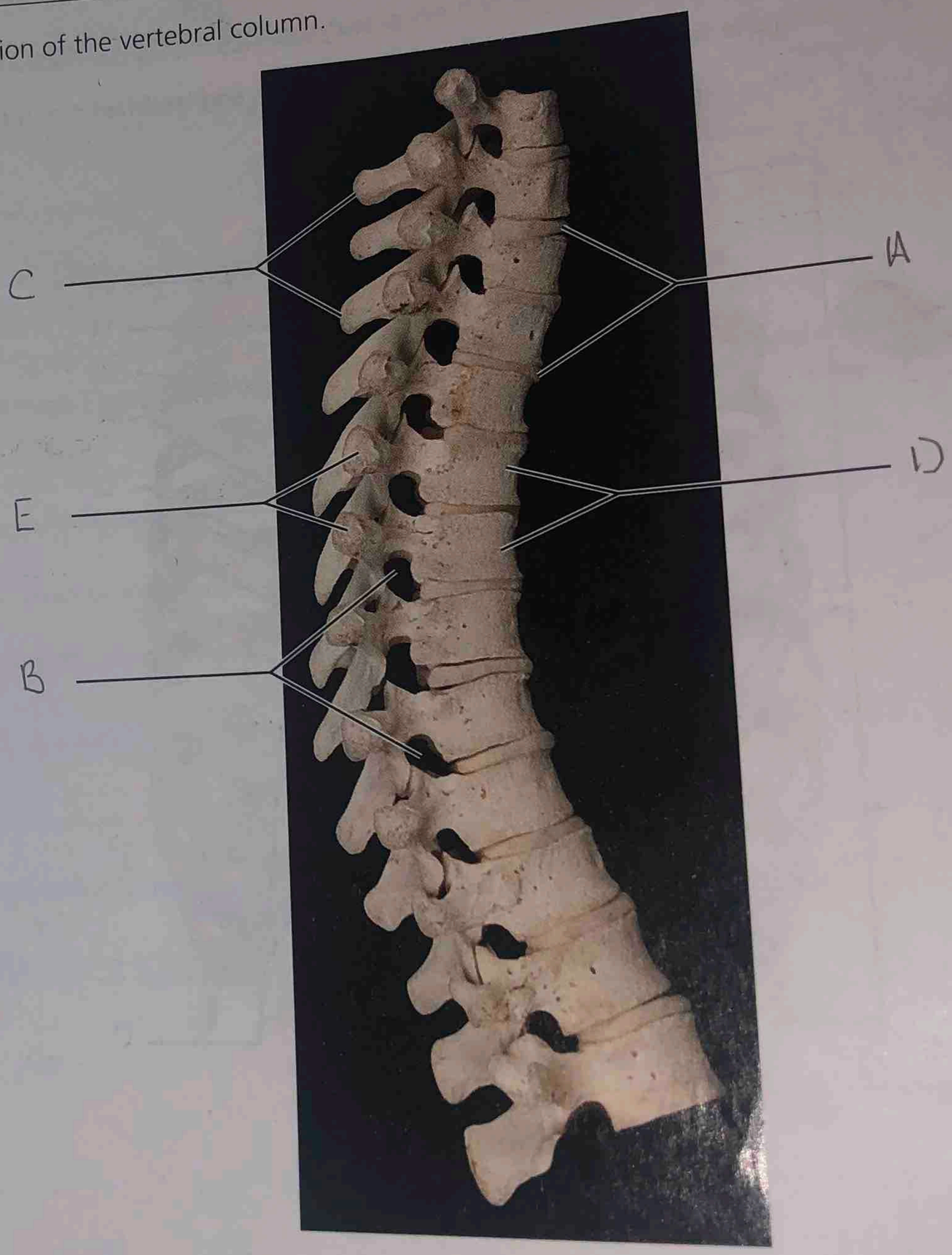
What problems might it cause? It can cause Paralysis

16. Which two spinal curvatures are obvious at birth? Thoracic and Sacral

Under what conditions do the secondary curvatures develop? The occur or develope with normal development

17. Use the key to label the structures on the thoracic region of the vertebral column.

Key:
a. intervertebral discs
b. intervertebral foramina
c. spinous prosesses
d. thoracic vertebrae
e. transverse processes



The Thoracic Cage

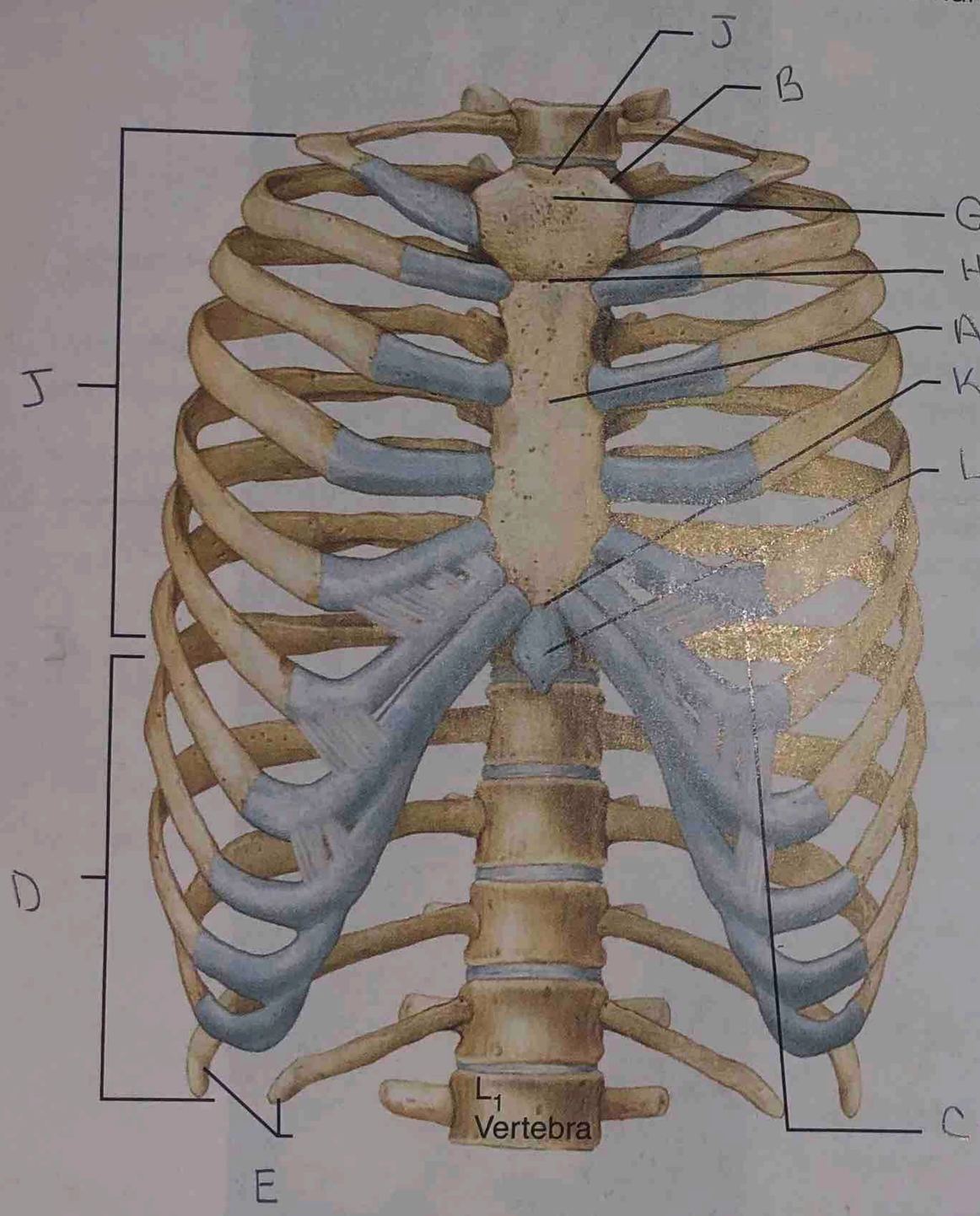
18. The major bony components of the thorax (excluding the vertebral column) are the Sternum and the Ribs

19. Differentiate between a true rib and a false rib. True Ribs attach to the sternum they have their own cartilage. False Rib Coastal cartilage attaches to other ribs

Is a floating rib a true or a false rib? Neither

20. What is the general shape of the thoracic cage? Cone Shape barrel like

21. Using the terms in the key, identify the regions and landmarks of the thoracic cage.



Key:
a. body
b. clavicular notch
c. costal cartilage
d. false ribs
e. floating ribs
f. jugular notch
g. manubrium
h. sternal angle
i. sternum
j. true ribs
k. xiphisternal joint
l. xiphoid process

The Fetal Skull

22. Are the same skull bones seen in the adult also found in the fetal skull? Yes they are the same

23. How does the size of the fetal face compare to its cranium? Face is shortened overshadowed by the large Cranium

How does this compare to the adult skull? Adult Cranium is smaller and the facial bones are proportionately larger and more prominent

24. What are the outward conical projections on some of the fetal cranial bones? Ossification Centers

25. What is a fontanelle? Fibrous membrane connecting fetal skull bones

What is its fate? Progressively ossified

What is the function of the fontanelles in the fetal skull? Allows fetal skull to be compressed slightly during birth passage

26. ✚ Craniosynostosis is a condition in which one or more of the fontanelles is replaced by bone prematurely. Discuss the rami fications of this early closure.

27. ✚ As we age, we often become shorter. Explain why this might occur. Discs between vertebrate lose fluid, arches in our feet flatten, we would loose muscle mass leading to poor p

28. ✚ The xiphoid process is often missing from the sternum in bone collections. Hypothesize why it might be missing. Cos it in to bone and fuses body of sternum as we grow older.