

9 REVIEW SHEET

EXERCISE The Axial Skeleton

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

Name Shavice Hendricks

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.

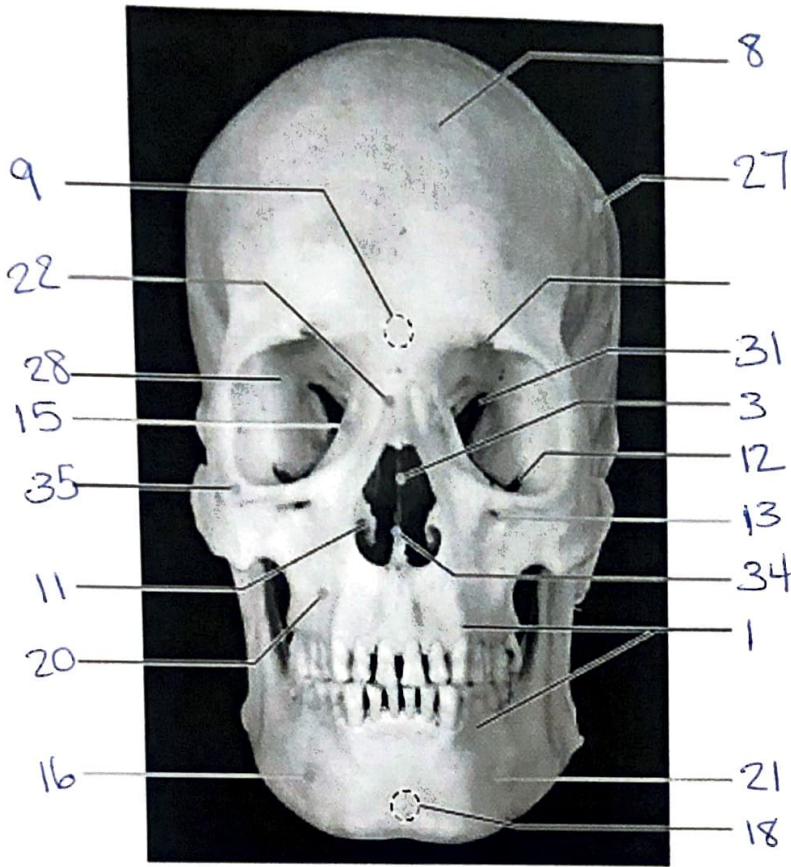
Column A

- | | |
|--------------------------|--|
| <u>B</u> | 1. forms the anterior cranium |
| <u>O</u> | 2. cheekbone |
| <u>H</u> | 3. bridge of nose |
| <u>J</u> | 4. posterior bones of the hard palate |
| <u>K</u> | 5. much of the lateral and superior cranium |
| <u>L</u> | 6. single, irregular, bat-shaped bone forming part of the cranial base |
| <u>E</u> | 7. tiny bones bearing tear ducts |
| <u>G</u> | 8. anterior part of hard palate |
| <u>A</u> | 9. superior and middle nasal conchae form from its projections |
| <u>M</u> | 10. site of mastoid process |
| <u>I</u> | 11. has condyles that articulate with the atlas |
| <u>C</u> | 12. small U-shaped bone in neck, where many tongue muscles attach |
| <u>M</u> | 13. organ of hearing found here |
| <u>N</u> | 14. two bones that form the nasal septum |
| <u>D</u> | 15. forms the most inferior turbinate |

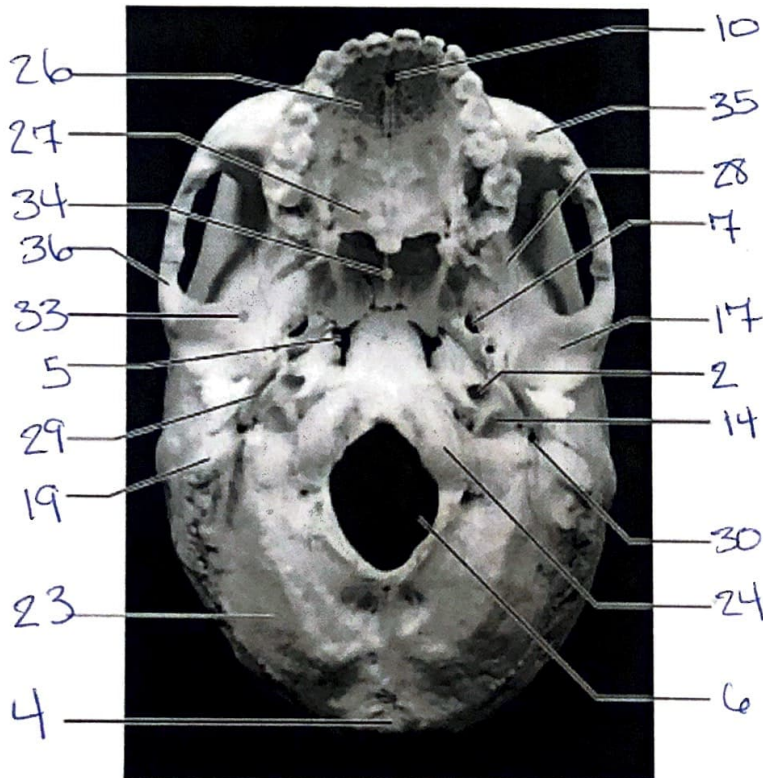
Column B

- | | |
|-------------------------------------|--------------------------|
| <input type="checkbox"/> | a. ethmoid |
| <input checked="" type="checkbox"/> | b. frontal |
| <input checked="" type="checkbox"/> | c. hyoid |
| <input checked="" type="checkbox"/> | d. inferior nasal concha |
| <input checked="" type="checkbox"/> | e. lacrimal |
| <input type="checkbox"/> | f. mandible |
| <input checked="" type="checkbox"/> | g. maxilla |
| <input checked="" type="checkbox"/> | h. nasal |
| <input checked="" type="checkbox"/> | i. occipital |
| <input checked="" type="checkbox"/> | j. palatine |
| <input checked="" type="checkbox"/> | k. parietal |
| <input checked="" type="checkbox"/> | l. sphenoid |
| <input checked="" type="checkbox"/> | m. temporal |
| <input checked="" type="checkbox"/> | n. vomer |
| <input checked="" type="checkbox"/> | 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. alveolar 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



10. incisive fossa
14. jugular foramen
17. mandibular fossa
28. sphenoid bone
30. stylomastoid foramen
35. zygomatic bone
24. occipital condyle

3. Define suture. Fibrous joint between skull bones
4. With one exception, the skull bones are joined by sutures. Name the exception.
Joints between the mandible & temporal bones
5. What bones are connected by the lambdoid suture?

Occipital and Parietal

What bones are connected by the squamous suture?

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

Frontal Occipital Right Parietal Right Temporal
Sphenoid Ethmoid Left Parietal Left Temporal

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

* Frontal, Maxilla, Ethmoid, Sphenoid

Function 1) Lighten the skull

Function 2) Resonance chambers for speech

8. What is the bony orbit? Bony 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 articulates with all of the other cranial bones.

15. What is a herniated disc? Nucleus Pulposus Compresses on Spinal cord

What problems might it cause?

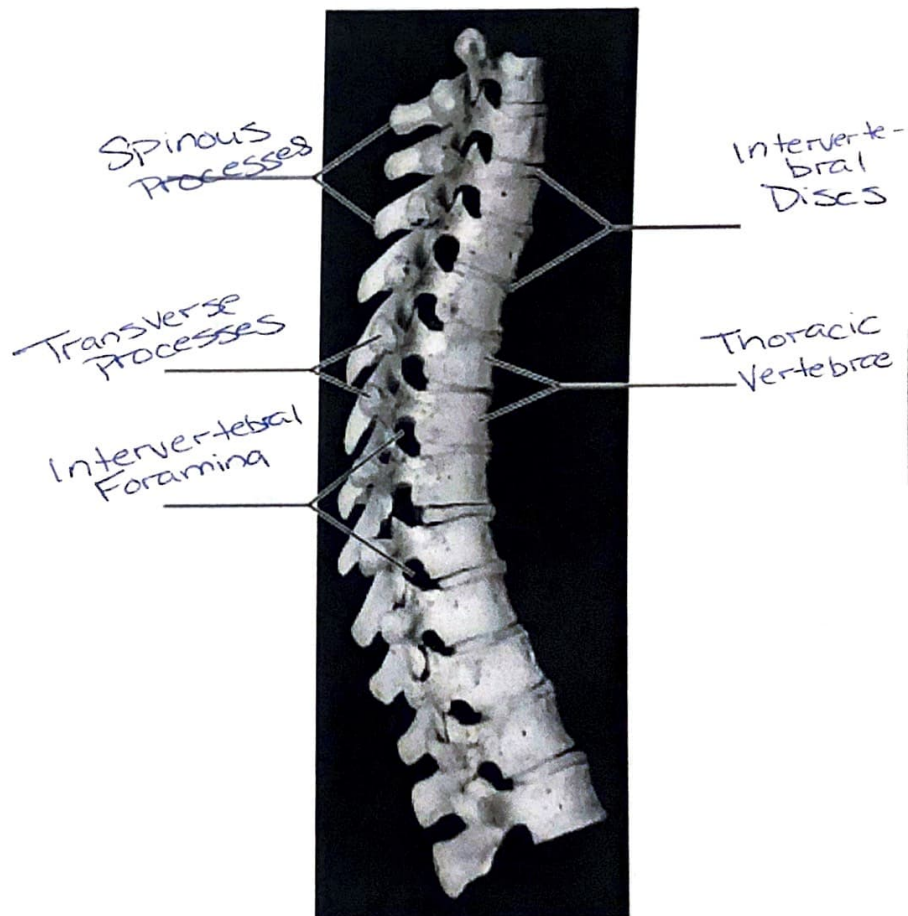
Paralysis

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

Under what conditions do the secondary curvatures develop? They develop or occur 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 processes
 - d. thoracic vertebrae
 - e. transverse processes



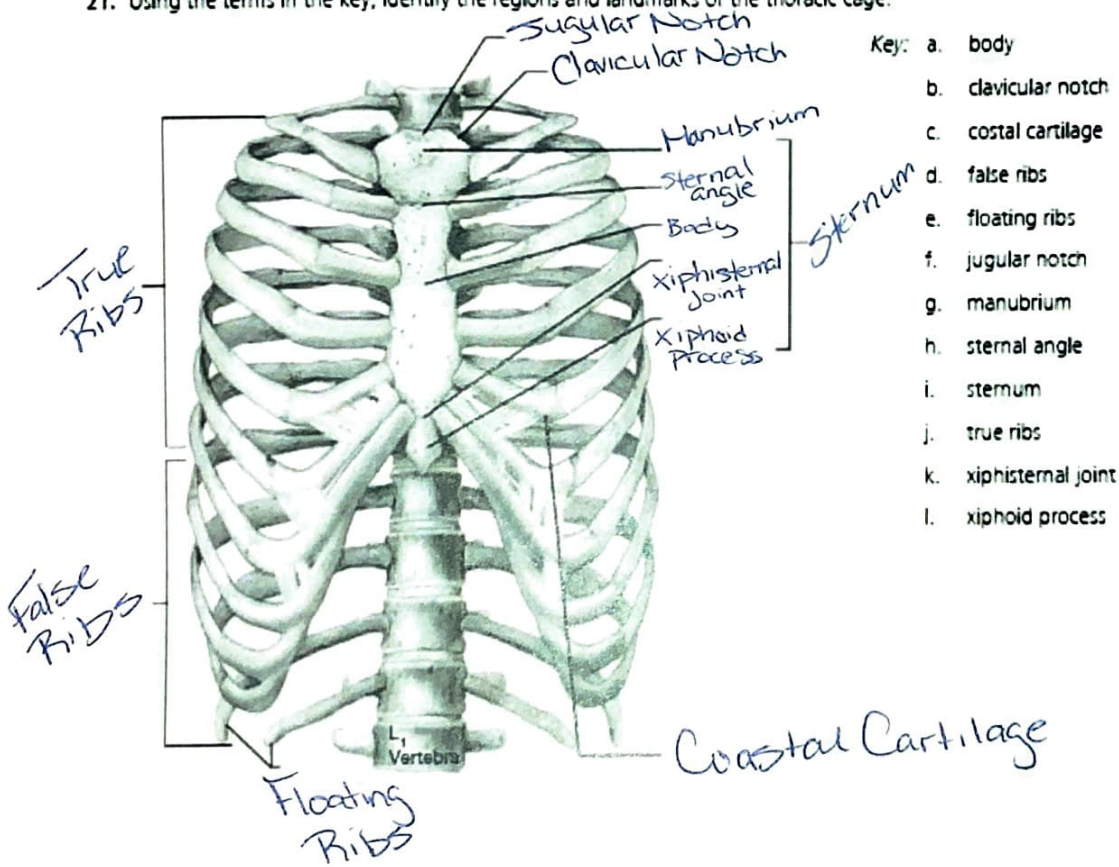
The Thoracic Cage

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 via their own individual cartilage; False Ribs costal cartilage attaches to other ribs costal cartilages before attaching to sternum.
Is a floating rib a true or a false rib? Neither, NO attachment to sternum or costal cartilages

20. What is the general shape of the thoracic cage? Cone-shaped Barrel-like

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



The Fetal Skull

22. Are the same skull bones seen in the adult also found in the fetal skull? Yes
23. How does the size of the fetal face compare to its cranium? Face is foreshortened, 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? Allow fetal skull to be compressed slightly during birth passage; Allows for fetal and infant brain growth.

26. **+** Craniosynostosis is a condition in which one or more of the fontanelles is replaced by bone prematurely. Discuss the ramifications of this early closure.

It happens because fused suture leads to restricted growth in some areas & compensatory bossing in other areas

27. **+** As we age, we often become shorter. Explain why this might occur. Disc between vertebrae lose fluid, arches in our feet flatten, we lose muscle mass leading to poor posture.

28. **+** The xiphoid process is often missing from the sternum in bone collections. Hypothesize why it might be missing. _____

Slowly ossifies in to bone and fuses with body of sternum as we grow older.