

# 9

## REVIEW SHEET The Axial Skeleton

Name Husna Sulthana

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**

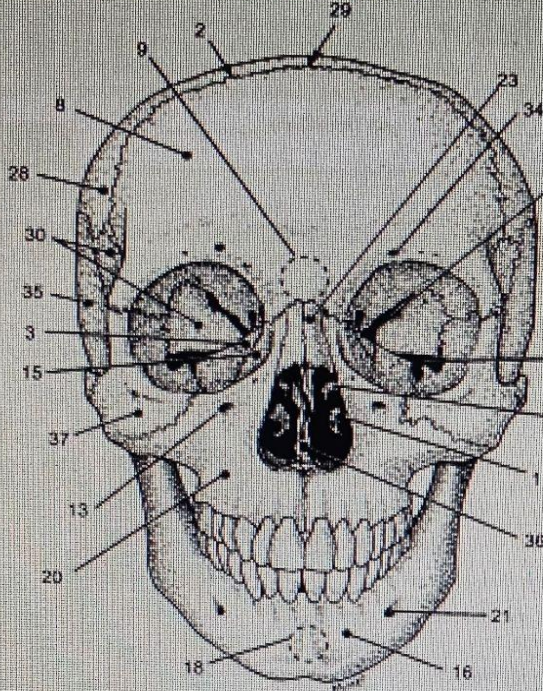
- B
- O
- F
- H
- J
- K
- I
- L
- E
- J
- A
- M
- L
- A
- F
- M
- B, A, L, G
- I
- I
- C
- M
- N     A
- A
- F     G
- N

**Column B**

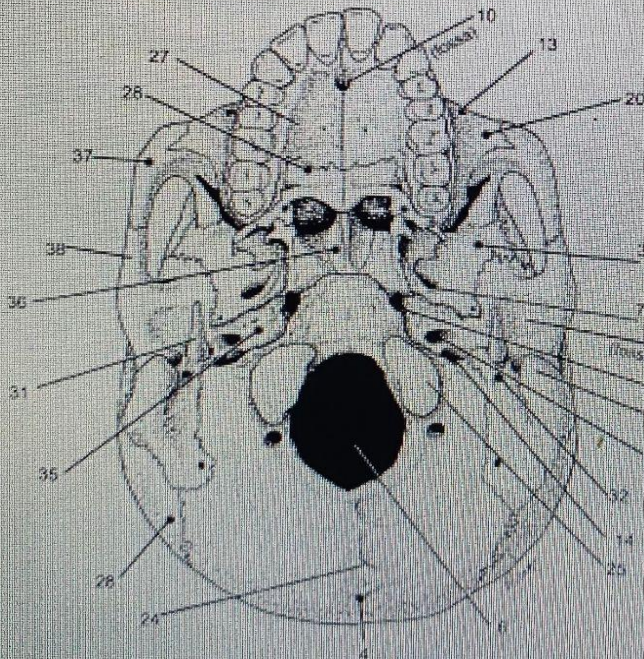
- 1. forehead bone
- 2. cheekbone
- 3. lower jaw
- 4. bridge of nose
- 5. posterior bones of the hard palate
- 6. much of the lateral and superior cranium
- 7. most posterior part of cranium
- 8. single, irregular, bat-shaped bone forming part of the cranial base
- 9. tiny bones bearing tear ducts
- 10. anterior part of hard palate
- 11. superior and middle nasal conchae form from its projections
- 12. site of mastoid process
- 13. site of sella turcica
- 14. site of cribriform plate
- 15. site of mental foramen
- 16. site of styloid process
- 17. four bones containing paranasal sinuses
- 18. condyles here articulate with the atlas
- 19. foramen magnum contained here
- 20. small U-shaped bone in neck, where many tongue muscles attach
- 21. organ of hearing found here
- 22. two bones that form the nasal septum
- 23. bears an upward protrusion, the "rooster's comb," or crista galli
- 24. contain sockets bearing teeth
- 25. forms the most inferior turbinate

- 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 (—), sutures (—), and bone markings (—) provided with various leader lines in the two diagrams below. Some responses from the key will be used more than once.



- Key:
1. carotid canal
  2. coronal suture
  3. ethmoid bone
  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. middle nasal concha of ethmoid
  23. nasal bone
  24. occipital bone
  25. occipital condyle
  26. palatine bone
  27. palatine process of maxilla
  28. parietal bone
  29. sagittal suture
  30. sphenoid bone
  31. styloid process
  32. stylomastoid foramen
  33. superior orbital fissure
  34. supraorbital foramen
  35. temporal bone
  36. vomer
  37. zygomatic bone
  38. zygomatic process of temporal bone



3. Define suture: all but one of the bones of the skull are joined by interlocking joints.
4. With one exception, the skull bones are joined by sutures. Name the exception. : The mandible
5. What bones are connected by the lambdoid suture? Occipital and parietal bones

What bones are connected by the squamous suture? Temporal and parietal bones

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

Frontal, left parietal, left temporal, right temporal, right parietal, occipital, sphenoid, ethmoid.

7. Give two possible functions of the sinuses. Lighten the skull and act as resonance chambers for speech.

8. What is the orbit? A cavity for the eye.

What bones contribute to the formation of the orbit? Ethmoid, sphenoid, lacrimal, maxilla, frontal, zygomatic, and palatine.

9. Why can the sphenoid bone be called the keystone of the cranium? Because it is in contact with all of the other cranial bones.

The Vertebral Column 10'

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.

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

Atlas 2. dens here provides a pivot for rotation of the first cervical IT vertebra (C1)

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

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

lumber 5. massive vertebrae; weight-sustaining

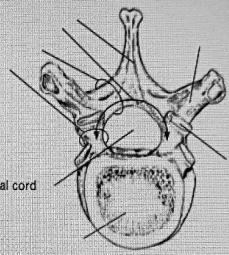
coccyx 6. "tail bone"; vestigial fused vertebrae

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

1. cavity enclosing the spinal cord  
 2. weight-bearing portion of the vertebra  
 3. provide levers against which muscles pull  
 4. provide an articulation point for the ribs  
 5. openings providing for exit of spinal nerves  
 6. structures that form an enclosure for the spinal cord  
 7. structures that form the vertebral arch



12. Describe how a spinal nerve exits from the vertebral column.  
exits through an intervertebral foramen

13. Name two factors/structures that permit flexibility of the vertebral column.  
presence of intervertebral discs and s-shaped construction of the vertebrae  
Fibrocartilage

14. What kind of tissue makes up the intervertebral discs?  
A ruptured disc

15. What is a herniated disc?  
adjacent nerves to be compressed  
 What problems might it cause?

16. Which two spinal curvatures are obvious at birth?  
Cervical and lumbar  
 Under what conditions do the secondary curvatures develop?  
after the child learns to sit up and stand.

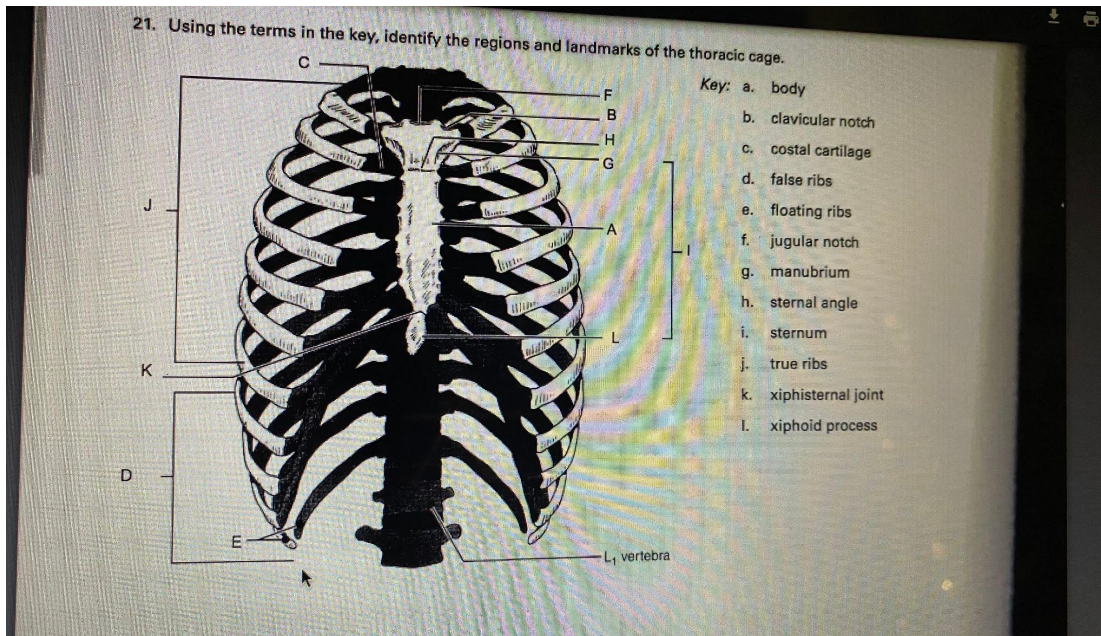
17. A, B,G,E,C,F,D

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

19. Differentiate between a true rib and a false rib. 'true ribs' are connected to your sternum by strips of cartilage.

Is a floating rib a true or a false rib? **False rib**

20. What is the general shape of the thoracic cage? **Cone shaped**



22. . Are the same skull bones seen in the adult also found in the fetal skull? **NO**

23. How does the size of the fetal face compare to its cranium? **The face is smaller**

How does this compare to the adult skull? **The infant skull is not fully developed**

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

25. What is a fontanelle? **soft spot in the skull of an infant**

What is its fate? **Ossify completely by the age of 2**

What is the function of the fontanelles in the fetal skull? **allow the head to mold to fit through the birth canal and allow for brain growth**

26.

