

The Axial Skeleton

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.

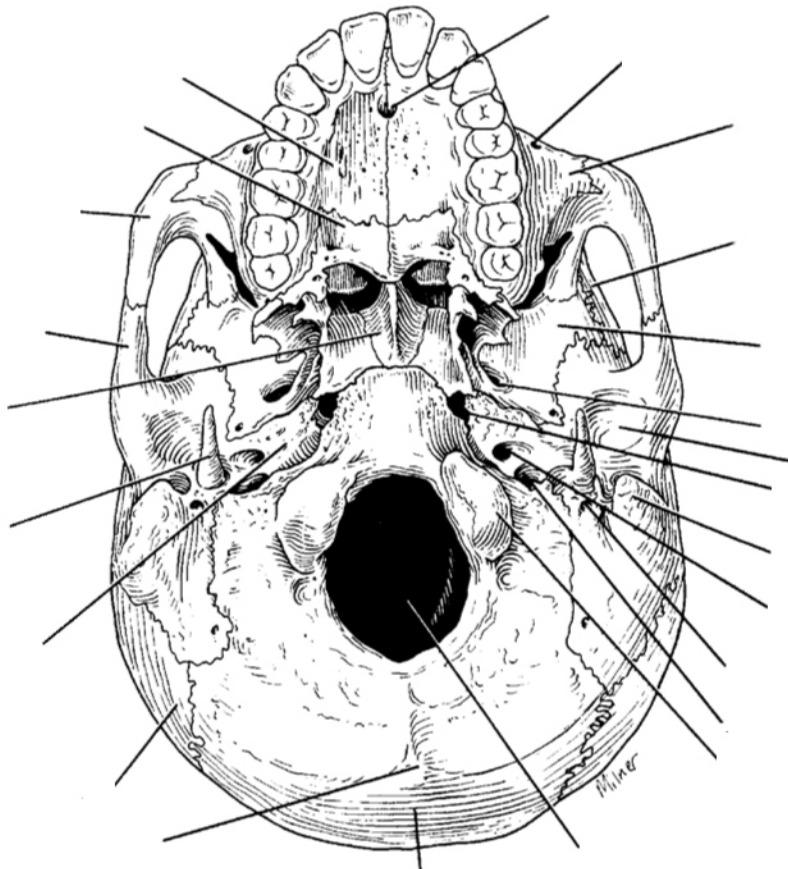
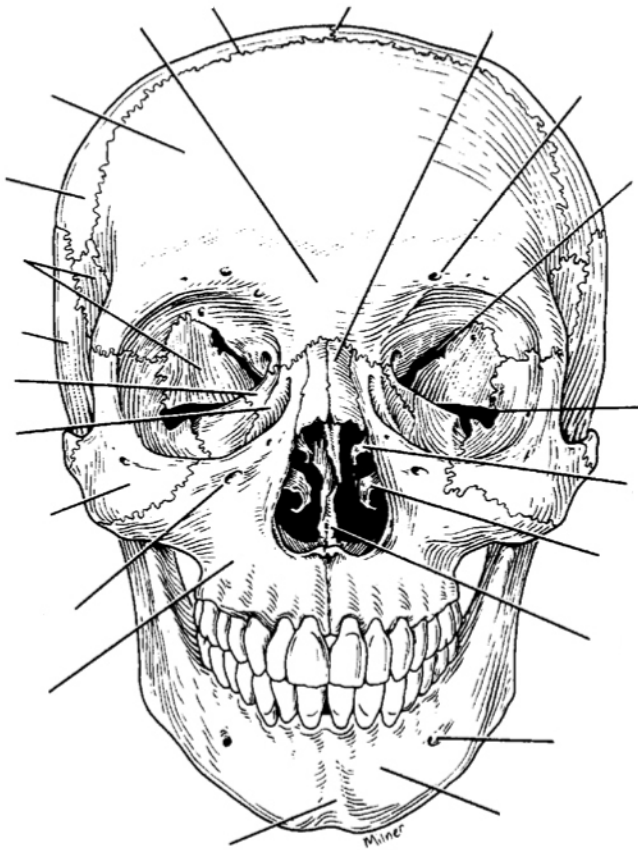
Column A

- _____ 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 floor
- _____ 9. tiny bones bearing tear ducts
- _____ 10. anterior part of hard palate
- _____ 11. superior and medial nasal conchae formed 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 processes
- _____, _____, _____, and _____
- _____ 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. middle ear found here
- _____ 22. nasal septum
- _____ 23. bears an upward protrusion, the "cock's comb," or crista galli
- _____, _____ 24. contain alveoli bearing teeth

Column B

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

2. Using choices from the numbered key to the right, identify all bones and bone markings provided with leader lines in the two diagrams below.



- 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*. _____

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

5. What bones are connected by the lambdoid suture?

What bones are connected by the squamous *suture*?

6. Name the eight bones of the cranium.

7. Give two possible functions of the sinuses. _____

8. What is the orbit? _____

What bones contribute to the formation of the orbit? _____

9. Why can the sphenoid bone be called the keystone of the cranial floor? _____

The Vertebral Column

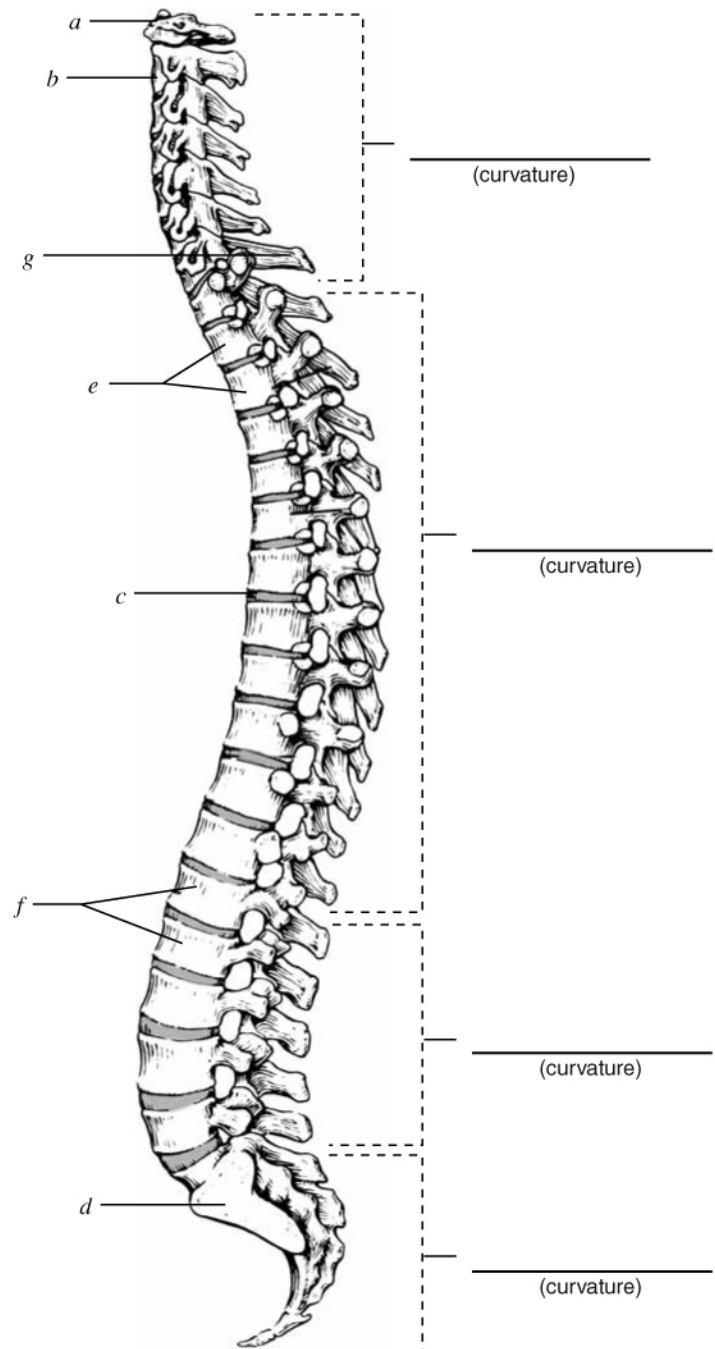
10. The distinguishing characteristics of the vertebrae composing the vertebral column are noted below. Correctly identify each described structure by choosing a response from the key.

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

- _____ 1. vertebral type containing foramina in the transverse processes, through which the vertebral arteries ascend to reach the brain
- _____ 2. dens here provides a pivot for rotation of the first cervical vertebra (C₁)
- _____ 3. transverse processes faceted for articulation with ribs; spinous process pointing sharply downward
- _____ 4. composite bone; articulates with the hip bone laterally
- _____ 5. massive vertebrae; weight-sustaining
- _____ 6. “tail bone”; vestigial fused vertebrae
- _____ 7. supports the head; allows a rocking motion in conjunction with the occipital condyles

17. On this illustration of an articulated vertebral column, identify each curvature indicated and label it as a primary or a secondary curvature. Also identify the structures provided with leader lines, using the letters of the terms listed in the key below.

Key: a. atlas
 b. axis
 c. intervertebral disc
 d. sacrum
 e. two thoracic vertebrae
 f. two lumbar vertebrae
 g. vertebra prominens



The Thoracic Cage

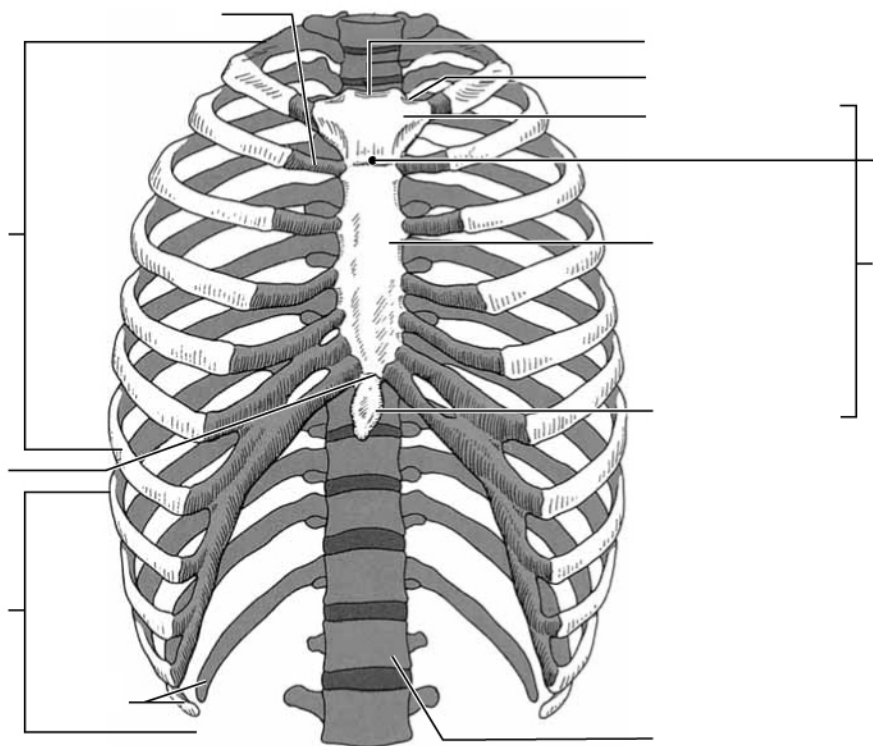
18. The major bony components of the thorax (excluding the vertebral column) are the _____ and the _____.

19. Differentiate between a true rib and a false rib. _____

Is a floating rib a true or a false rib? _____

20. What is the general shape of the thoracic cage? _____

21. Using the terms in the key, identify the regions and landmarks of the bony thorax.



- 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