

Overview of the Skeleton: Bone Markings

Match the terms in column B with the appropriate description in column A.

Column A

- | | |
|-------|--|
| _____ | 1. sharp, slender process* |
| _____ | 2. small rounded projection* |
| _____ | 3. narrow ridge of bone* |
| _____ | 4. large rounded projection* |
| _____ | 5. structure supported on neck ⁺ |
| _____ | 6. armlike projection ⁺ |
| _____ | 7. rounded, articular projection ⁺ |
| _____ | 8. narrow opening [±] |
| _____ | 9. canal-like structure |
| _____ | 10. round or oval opening through a bone [±] |
| _____ | 11. shallow depression |
| _____ | 12. air-filled cavity |
| _____ | 13. large, irregularly shaped projection* |
| _____ | 14. raised area on or above a condyle* |
| _____ | 15. projection or prominence |
| _____ | 16. smooth, nearly flat articular surface [±] |

Column B

- a. condyle
- b. crest
- c. epicondyle
- d. facet
- e. fissure
- f. foramen
- g. fossa
- h. head
- i. meatus
- j. process
- k. ramus
- l. sinus
- m. spine
- n. trochanter
- o. tubercle
- p. tuberosity

*a site of muscle and ligament attachment

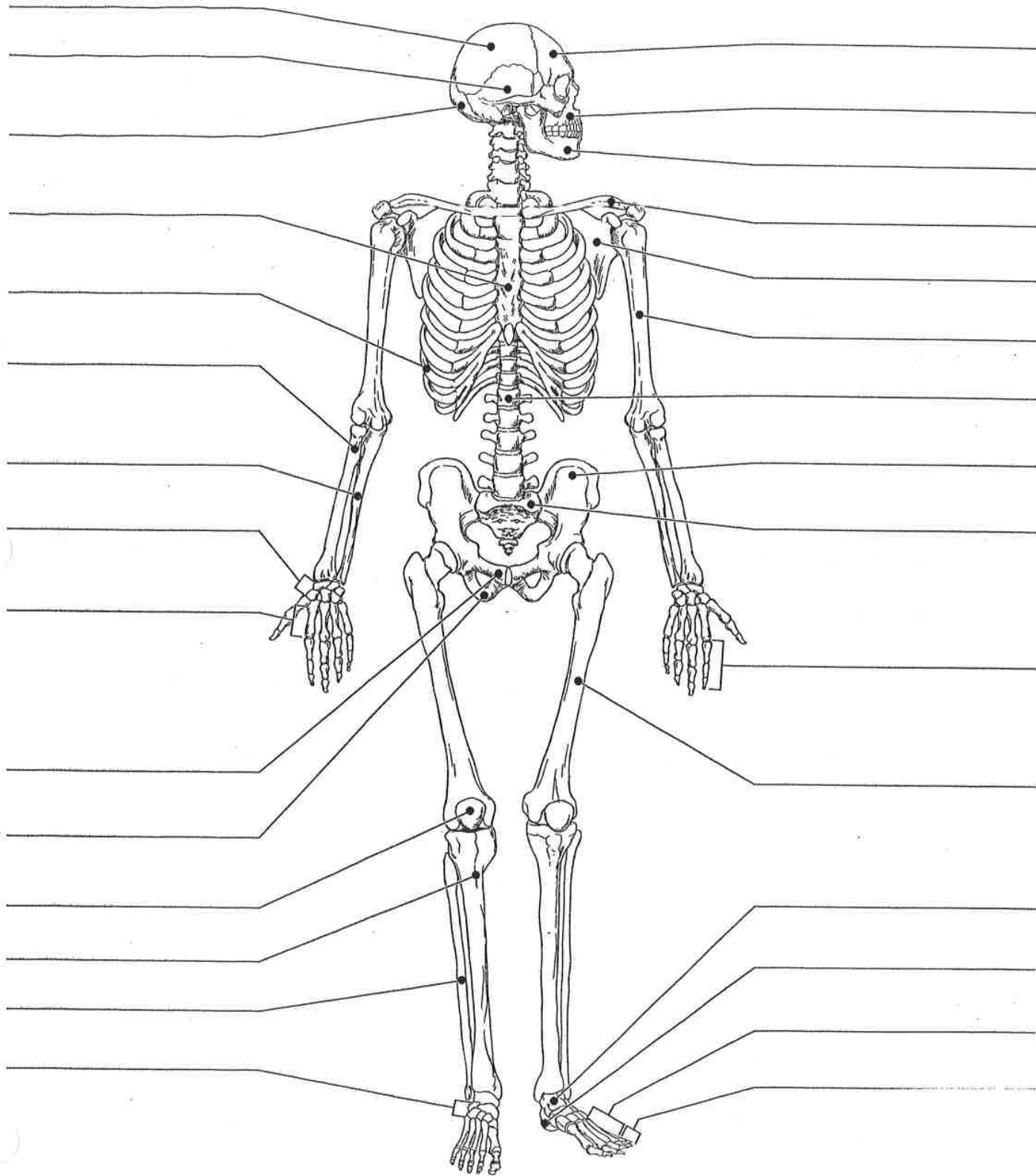
⁺takes part in joint formation

[±]a passageway for nerves or blood vessels

Name _____

Summary of Skeleton

Identify all indicated bones (or groups of bones) in the diagram of the articulated skeleton below.



Bone Structure

Bones contain cavities, processes, depressions, and other surface variations that serve different purposes, but are useful in identification. Terms that pertain to the different types of markings are as follows:

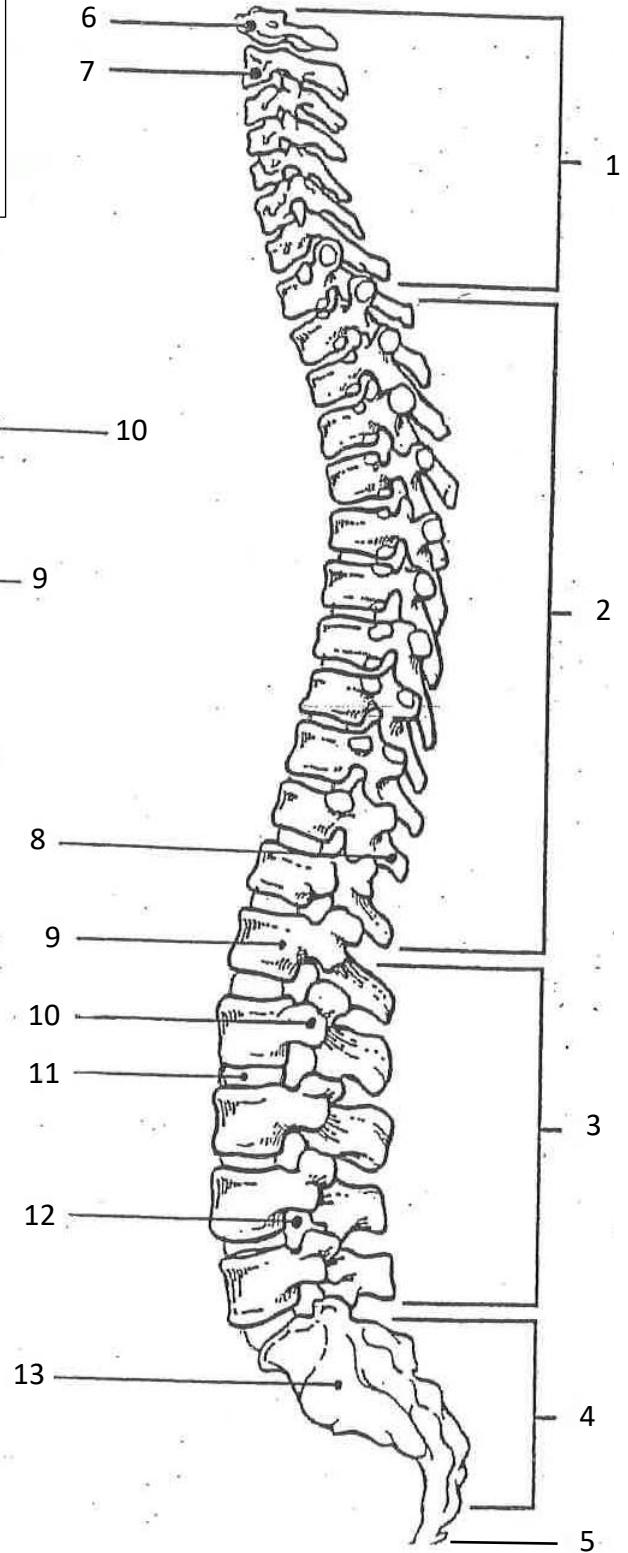
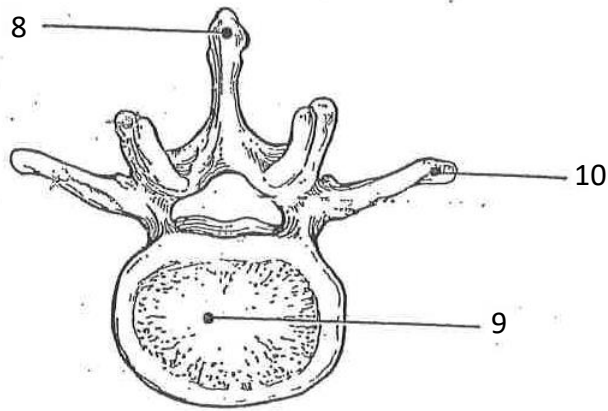
1. _____ An opening in a bone that provides a passageway for nerves and blood vessels.
2. _____ A shallow depression in a bone, often a socket-like feature into which another bone articulates
3. Sulcus _____ A groove or furrow
4. _____ A canal or long, tube-like passageway
5. Fissure _____ A narrow slit
6. _____ A cavity in the bone

Any prominence on a bone can be termed a "process." Processes exist in various shapes and sizes. Different types of processes are as follows:

7. _____ A rounded, knuckle-like feature that serves as an attachment point for muscles
8. _____ A large, roughened process
9. Tubercle _____ A small, rounded process
10. _____ A very large process associated with articulations with other bones
11. Head _____ A portion of bone supported by a restricted section or neck
12. Crest _____ A narrow ridge of bone
13. Spine _____ A sharp, slender projection

Parts of the Vertebral Column

- | | |
|----------------------------|------------------------|
| ___ atlas | ___ lumbar curvature |
| ___ axis | ___ sacral curvature |
| ___ body of vertebra | ___ sacrum |
| ___ coccyx | ___ spinous process |
| ___ intervertebral disc | ___ thoracic curve |
| ___ intervertebral foramen | ___ transverse process |
| cervical curvature | |



The Vertebral Column

1. 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.

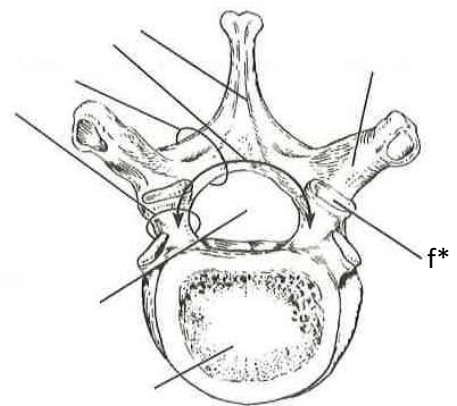
- Key:
- | | | |
|--------------------------------|--------------------|----------------------|
| a. atlas | d. coccyx | f. sacrum |
| b. axis | e. lumbar vertebra | g. thoracic vertebra |
| c. cervical vertebra – typical | | |

- | | | |
|-------|----|---|
| _____ | 1. | vertebra 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 (C ₁) |
| _____ | 3. | transverse process faceted for articulation with ribs; spinous process pointing sharply downward |
| _____ | 4. | composite bone; articulates with the hip bone laterally |
| _____ | 5. | massive vertebra; weight-sustaining |
| _____ | 6. | “tail bone;” vestigial fused vertebrae |
| _____ | 7. | supports the head; allows rocking motion in conjunction with the occipital condyles |

2. 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 |
| _____, <u>f*</u> | 4. | provide an articulation point for the ribs |
| _____ | 5. | openings provide for exit of spinal nerves |
| _____, _____ | 6. | structures that form an enclosure for the spinal cord |
| _____, _____, _____ | 7. | structures that form the vertebral arch |

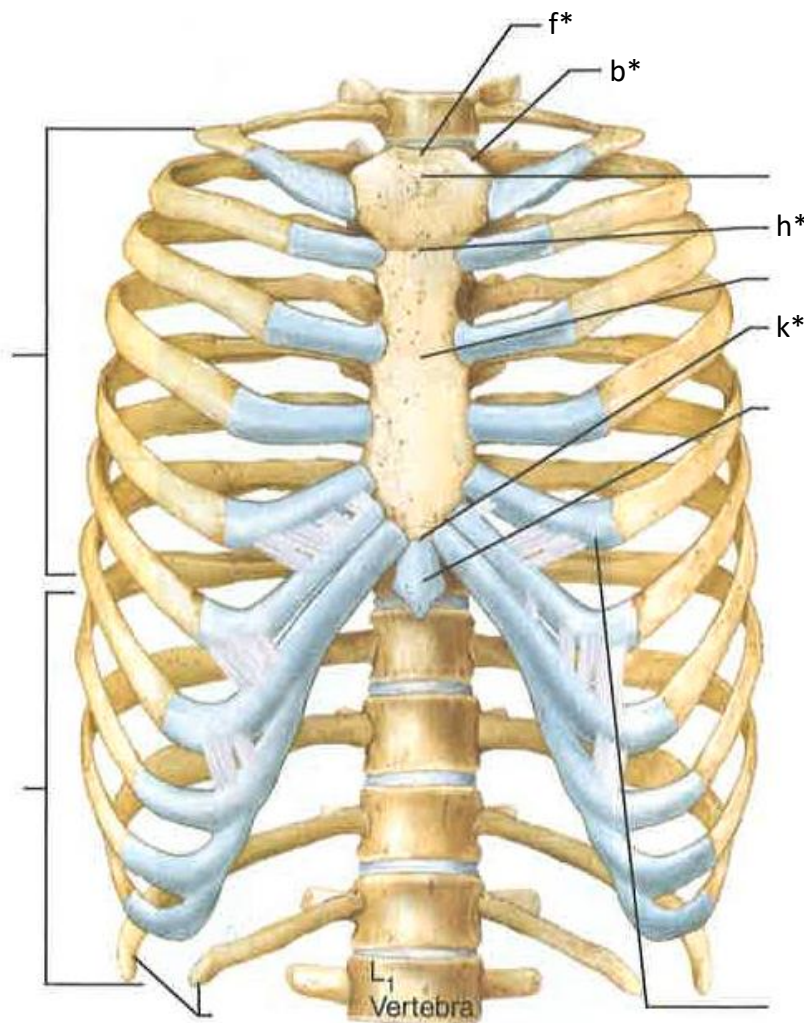


*not on master list

The Thoracic Cage

1. The major bony components of the thorax (excluding the vertebral column) are the _____ and the _____.
2. Differentiate between a true rib and a false rib. _____

3. Is a floating rib a true rib or a false rib? _____
4. What is the general shape of the thoracic cage? _____
5. Using the terms in the key, identify the regions and landmarks of the thoracic cage.

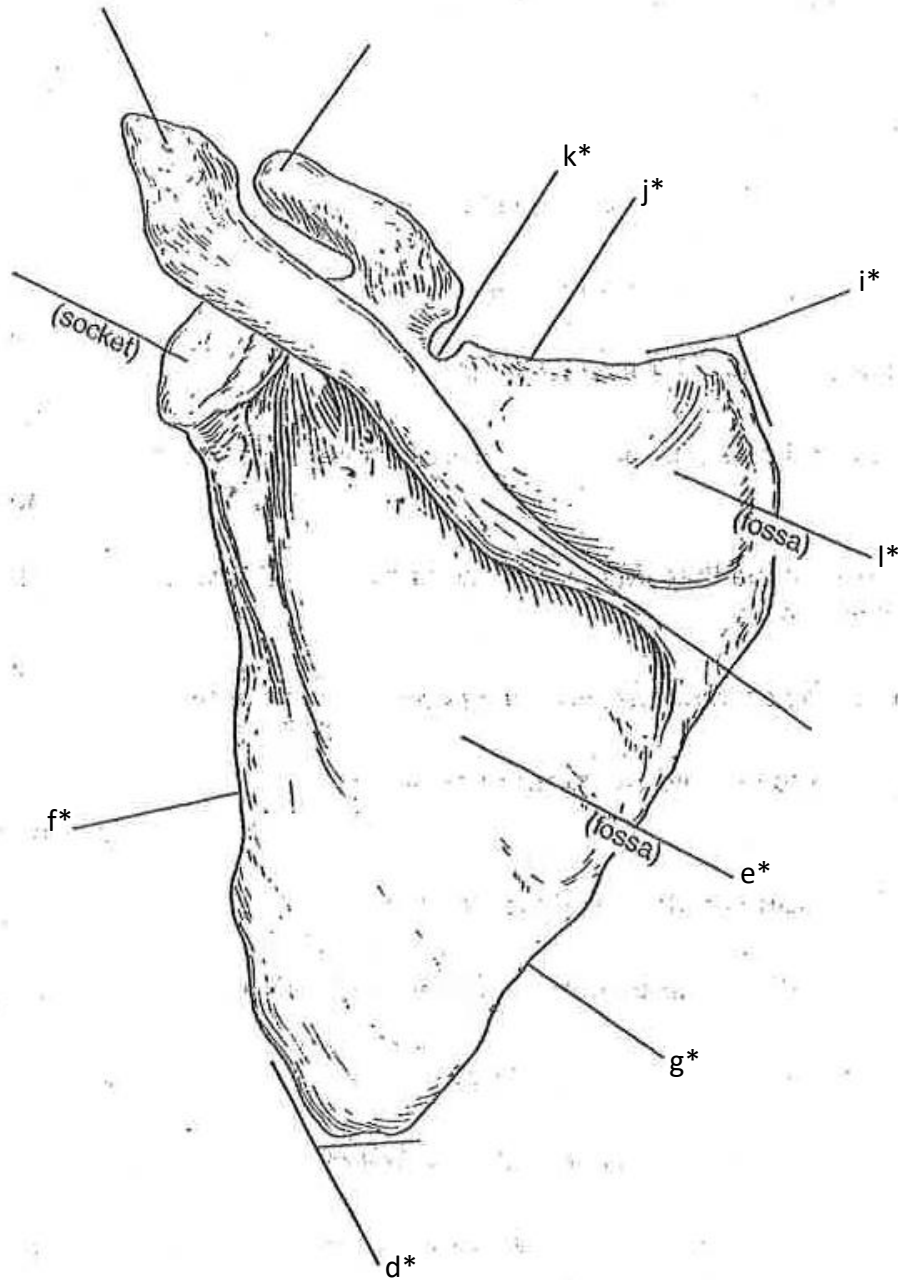


- Key:
- a. body
 - b. clavicular notch*
 - c. costal cartilage
 - d. vertebrochondral ribs
 - e. vertebral ribs
 - f. jugular notch*
 - g. manubrium
 - h. sternal angle*
 - i. sternum
 - j. vertebrosteral ribs
 - k. xiphisternal joint*
 - l. xiphoid process

*not on testable list

The Scapula

Using items from the key at the right, identify the anatomical landmarks and regions of the scapula.



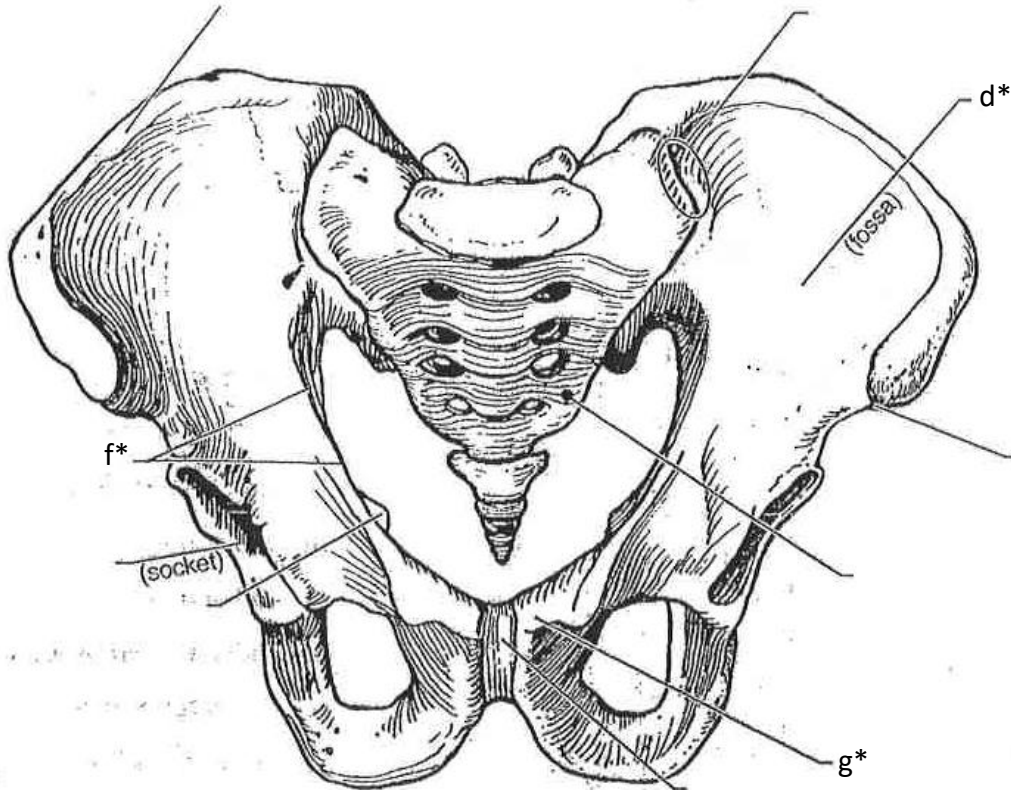
- Key:
- a. acromion
 - b. coracoid process
 - c. glenoid cavity
 - d. inferior angle*
 - e. infraspinous fossa*
 - f. lateral border*
 - g. medial border*
 - h. spine
 - i. superior angle*
 - j. superior border*
 - k. suprascapular notch*
 - l. supraspinous fossa*

*not on testable list

Name _____

The Pelvic Girdle

Use letters from the key at the right to identify the bone markings on this illustration of an articulated pelvis. Make an educated guess as to whether the illustration shows a male or female pelvis, and provide two reasons for your decision.



- Key:
- a. acetabulum
 - b. anterior superior iliac spine
 - c. iliac crest
 - d. iliac fossa*
 - e. ischial spine
 - f. pelvic brim*
 - g. pubic crest*
 - h. pubic symphysis
 - i. sacroiliac joint
 - j. sacrum

*not on testable list

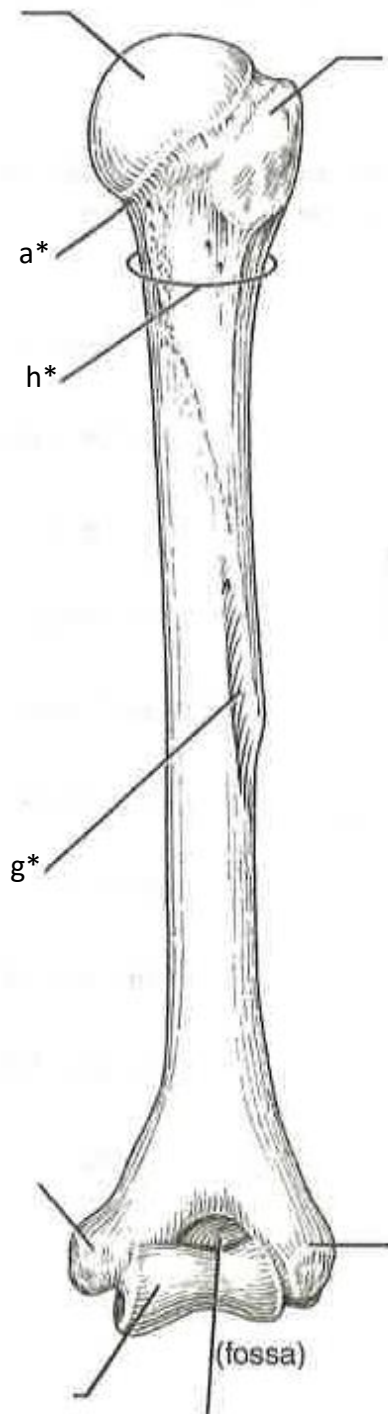
This is a _____ (male/female) pelvis because

1. _____
2. _____

Name _____

The Humerus

Match the terms in the key on the right with the appropriate structures on the drawing of the Humerus. Also decide whether the bone shown is a right or left bone, and whether the view shown is anterior or posterior.



- Key:
- a. anatomical neck*
 - b. greater tubercle
 - c. head
 - d. lateral epicondyle
 - e. medial epicondyle
 - f. olecranon fossa
 - g. radial groove*
 - h. surgical neck*
 - i. trochlea

*not on testable list

This Humerus is a _____ (right/left) bone in a/an _____ (anterior/posterior) view.