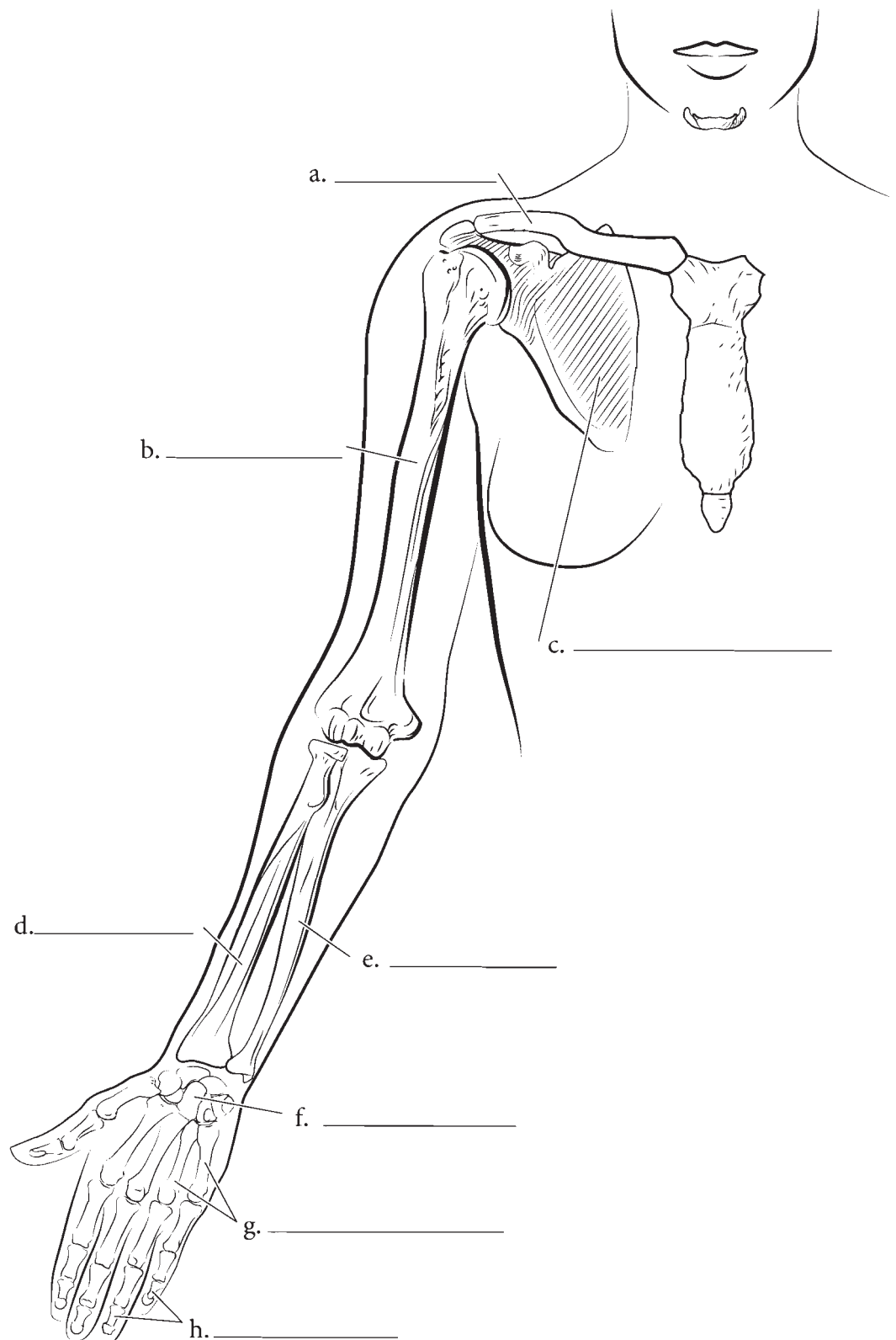


## APPENDICULAR SKELETON—PECTORAL GIRDLE AND UPPER EXTREMITY

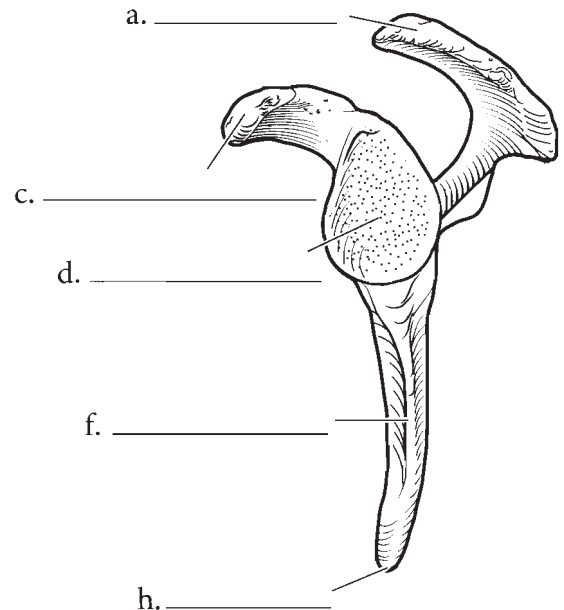
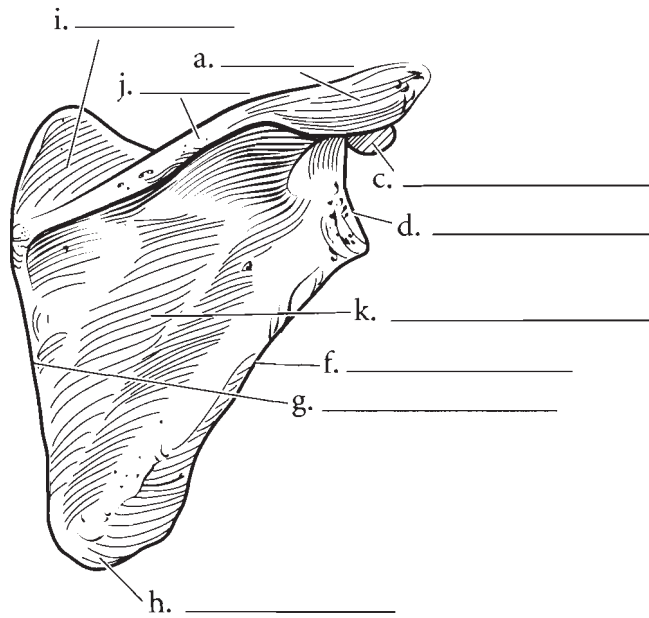
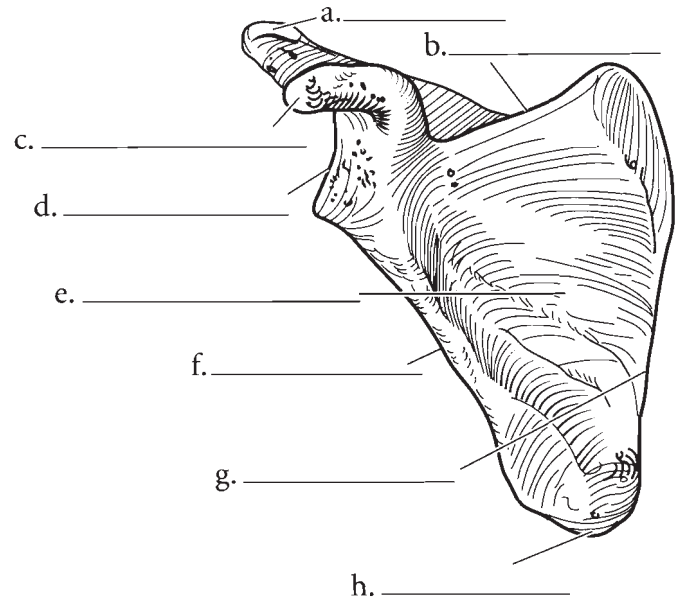
The pectoral girdle is made of the **clavicles** and the **scapulae**. The upper extremity consists of the **humerus** of the arm, the **radius** and **ulna** of the forearm, and the **carpals**, **metacarpals**, and **phalanges** of the hand. Locate these major regions of the upper extremity and label them on the diagram. Color these areas in different colors on the illustration.



**Answer Key:** a. Clavicle, b. Humerus,  
c. Scapula, d. Radius, e. Ulna, f. Carpals,  
g. Metacarpals, h. Phalanges

## SCAPULA

The pectoral girdle consists of the scapulae and the clavicles. Each scapula is a triangular bone and the three edges are known as the **superior border**, the **lateral border**, and the **medial border**. The **scapular spine** is on the posterior surface and it expands into a terminal process known as the **acromion process**. Above the spine is the **supraspinous fossa**. Below the spine is the **infraspinous fossa** and on the anterior side of the scapula is the **subscapular fossa** and the **coracoid process**. The **inferior angle** of the scapula is at the junction of the medial and lateral borders. Inferior to the acromion process is the **glenoid fossa**. This is a depression where the head of the humerus articulates with the scapula. Label the various features of the scapula and color in the regions of the bone with different colors. Locate as many of the features from the various angles presented.

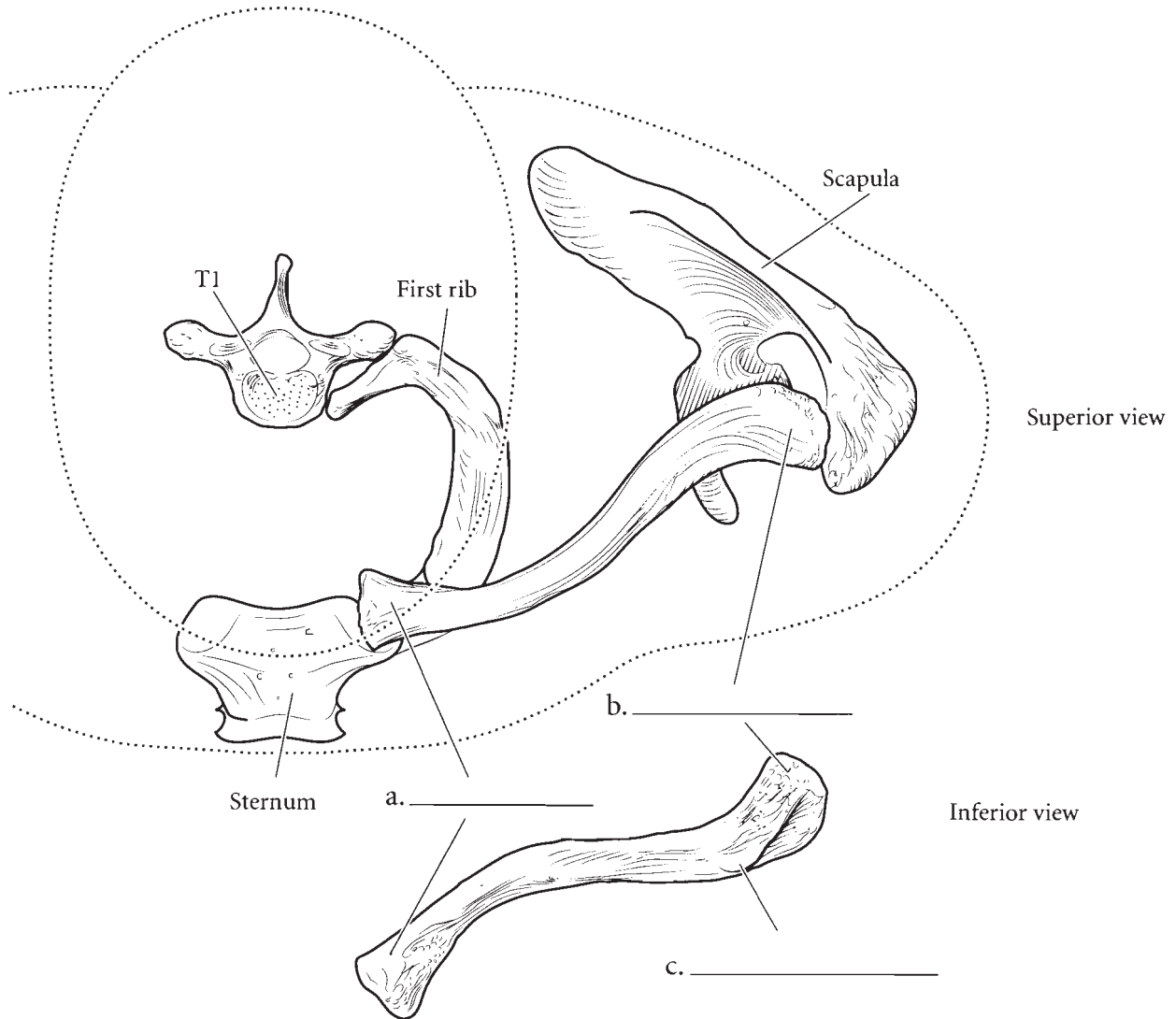


**Answer Key:** a. Acromion process, b. Superior border, c. Coracoid process, d. Glenoid fossa, e. Subscapular fossa, f. Lateral border, g. Medial border, h. Inferior angle, i. Supraspinous fossa, j. Scapular spine, k. Infraspinous fossa

### CLAVICLE

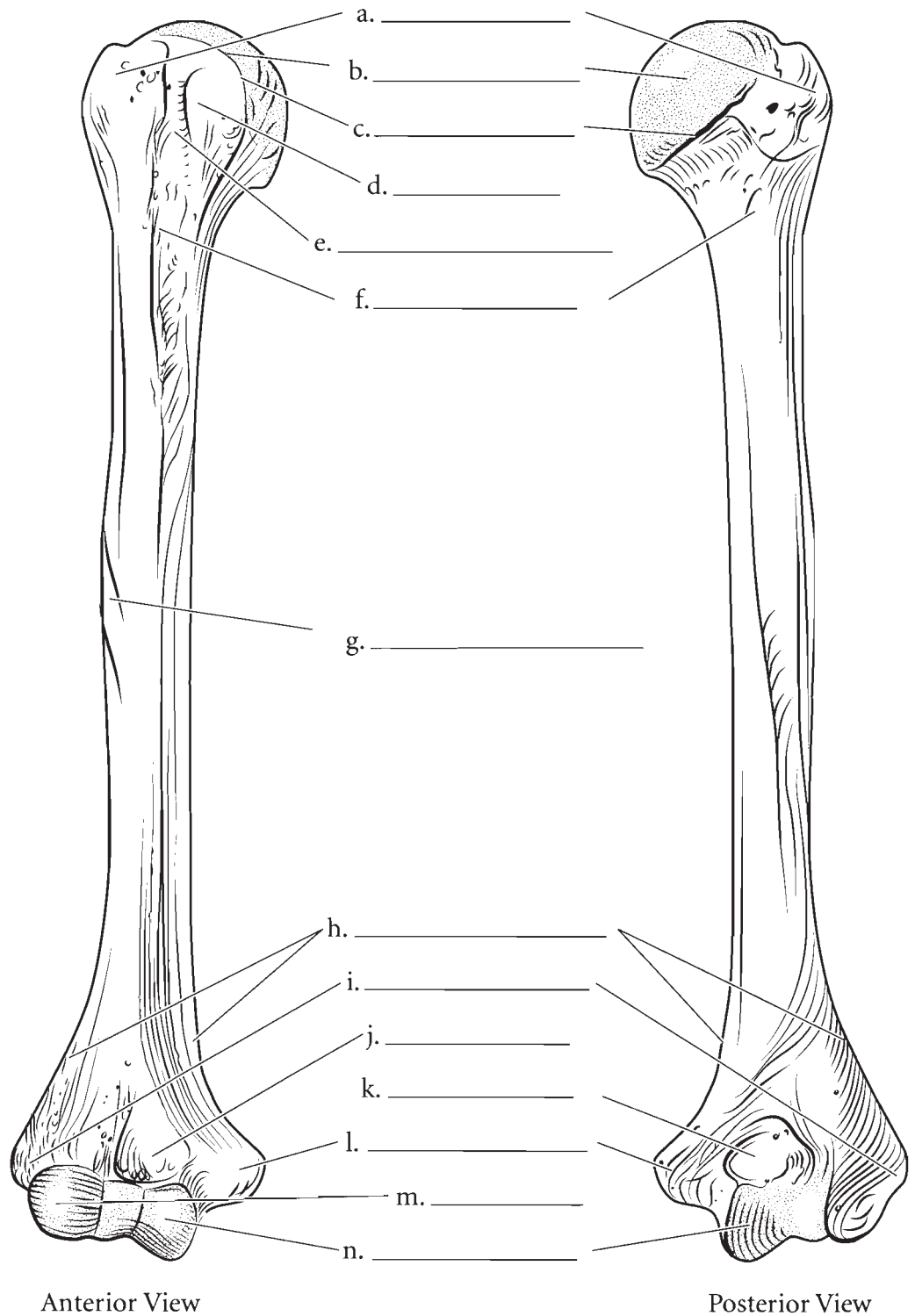
The clavicle is a thin bone that stabilizes the shoulder joint in a lateral position. It has a blunt end that articulates with the sternum (the **sternal end**) and a flattened end that joins with the acromion process of the

scapula. This is called the **acromial end**. A small bump on the inferior part of the clavicle has a ligament that attaches to the coracoid process of the scapula. This bump is called the **conoid tubercle**. Label the clavicle and color the ends and the conoid tubercle.



## HUMERUS

The humerus has a proximal **head** that fits into the glenoid fossa of the scapula. Just at the edge of the head is a rim known as the **anatomical neck**. Below this neck are the **greater** and **lesser tubercle** and the depression between the two is the **intertubercular groove**. Below these is the **surgical neck** of the humerus. The deltoid muscle attaches to the humerus at the **deltoid tuberosity** and the two expanded wing-like processes at the distal end of the humerus are the **supracondylar ridges**. Inferior to these are the **medial** and **lateral epicondyles** and at the articulating ends of the humerus are the lateral **capitulum** and the medial **trochlea**. The depression on the anterior surface of the humerus into which the ulna fits is called the **coronoid fossa** and the posterior depression where the elbow locks into the humerus is called the **olecranon fossa**. Label the figure and color in the specific parts of the illustration.



Anterior View

Posterior View

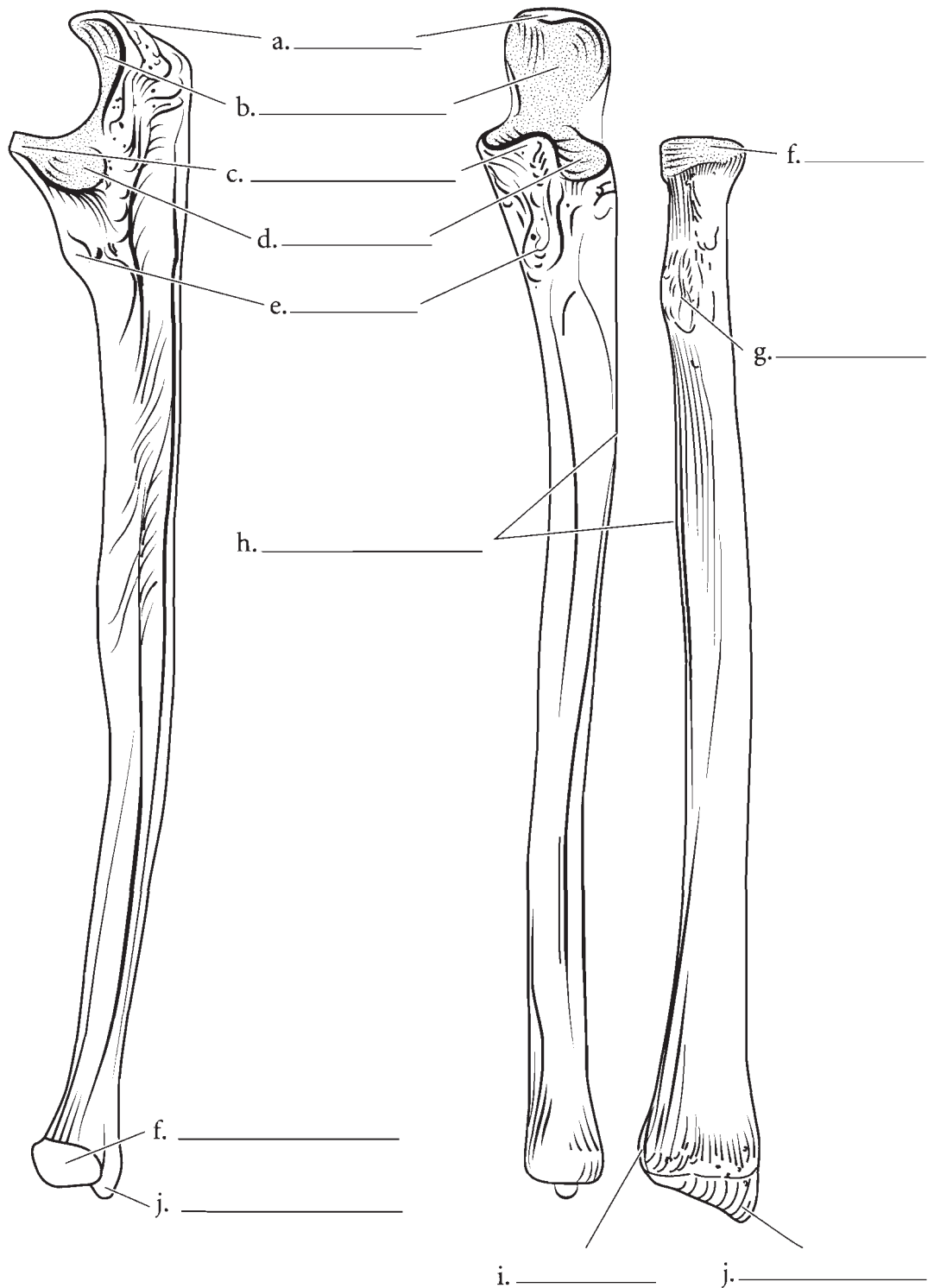
**Answer Key:** a. Greater tubercle, b. Head, c. Anatomical neck, d. Lesser tubercle, e. Intertubercular groove, f. Surgical neck, g. Deltoid tuberosity, h. supracondylar ridges, i. Lateral epicondyle, j. Coronoid fossa, k. Olecranon fossa, l. Medial epicondyle, m. Capitulum, n. Trochlea

## FOREARM BONES

The radius has a circular **head**, a **radial tuberosity** on the shaft (where the biceps brachii muscle attaches), and a distal **styloid process**. At the distal end of the radius is a depression where the ulna joins with the radius. This is known as the **ulnar notch** of the radius.

The ulna has a proximal **olecranon process**, a **coronoid process**, and the **trochlear notch** between the two. Just distal to the coronoid process of the ulna is the **tuberosity of the ulna**, a projection where muscles attach. The **head** of the ulna is distal and it also has a **styloid process**. At the proximal portion of the ulna is a depression where the head of the radius articulates with the ulna. This depression is known as the **radial notch** of the ulna.

When the two bones are joined you can see where each fits into the other. On the edge of each bone is the **interosseus margin**. This is a ridge where the interosseus membrane connects the bones.

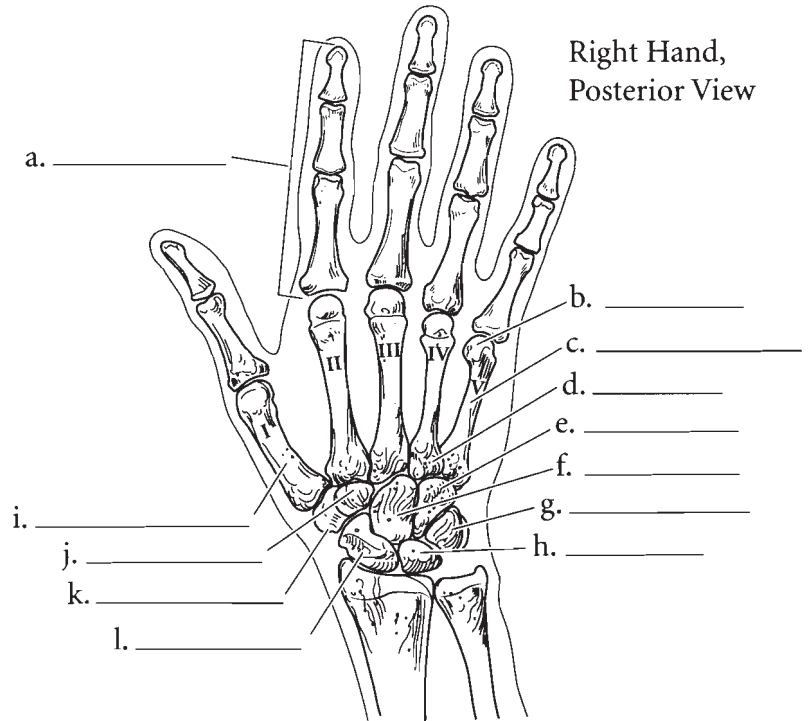


**Answer Key:** a. Olecranon process, b. Trochlear notch, c. Coronoid process, d. Radial notch, e. Tuberosity of the ulna, f. Head, g. Radial tuberosity, h. Interosseus margin, i. Ulnar notch, j. Styloid process

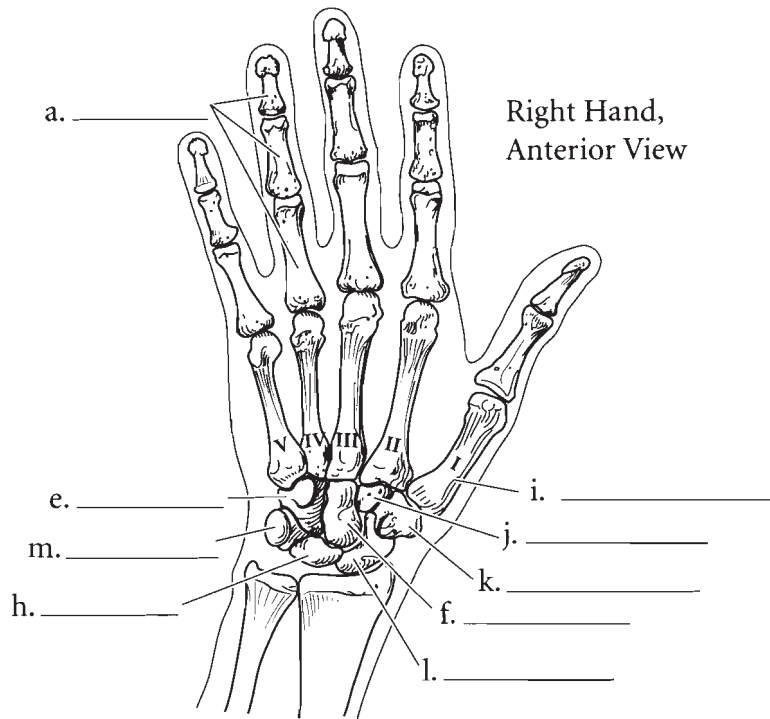
## HAND BONES

The hand consists of 27 bones divided into three groups: the **carpals**, the **metacarpals**, and the **phalanges**. The thumb is known as the **pollex** and is listed as the first digit of the hand. The index finger is the second digit and the fingers are listed sequentially with the little finger being the fifth digit. The bones of the fingers are known as **phalanges** and they are named according to what digit they belong and as being proximal, middle or distal. Therefore the bone of tip of the little finger is the distal phalanx of the fifth digit while the bone in the place where you would normally wear a wedding ring is the proximal phalanx of the fourth digit. Each phalanx has a proximal base, a shaft, and a distal head. The **metacarpals** are the bones of the palm of the hand. Each metacarpal also has a proximal base, a shaft, and a distal head. There are five metacarpals and they are named for the phalanges that extend from them. The first metacarpal articulates with the thumb. The carpals are the bones of the wrist. There are eight carpal bones in two rows. The bone under the thumb is the **trapezium**. The one medial to it is the **trapezoid**. The **capitate** is found under the third metacarpal and the **hamate** finishes that row. Proximal to the trapezium is the **scaphoid**, which joins with the radius. The next bone in line is the **lunate**, followed by the **triquetrum**, and finally the little **pisiform** bone. If you memorize the bones in this sequence you can use a mnemonic device to remember them. This mnemonic is *The Tom Cat Has Shaken Loose To Prowl*. The first letter of the mnemonic represents the first letter of the carpal bone. Label the illustration and color all of the phalanges one color. Color the metacarpals another color and color the carpal bones individual colors. As you color the various illustrations of the hand use the same color scheme for the bones.

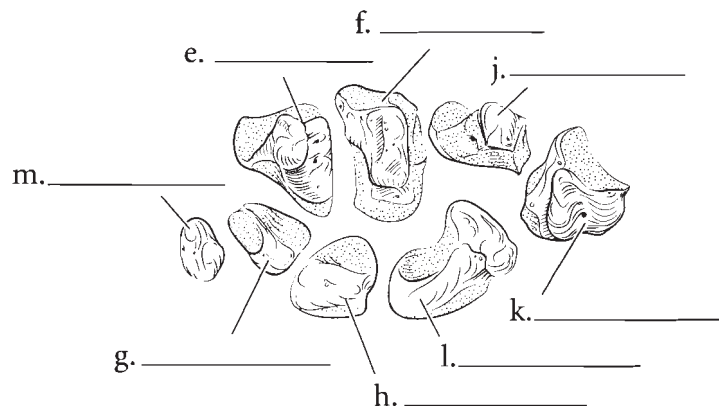
Right Hand,  
Posterior View



Right Hand,  
Anterior View



Right Hand,  
Anterior View,  
Carpals



**Answer Key:** a. Phalanges, b. Head, c. Shaft, d. Base, e. Hamate, f. Capitate, g. Triquetrum, h. Lunate, i. Metacarpal, j. Trapezoid, k. Trapezium, l. Scaphoid, m. Pisiform