The Language of Anatomy

Surface Anatomy

1. Match each of the following descriptions with a key equivalent, and record the key letter or term in front of the description.

Key:  
- a. buccal
- b. calcaneal
- c. cephalic
- d. digital
- e. patellar
- f. scapular

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a: buccal</td>
<td>cheek</td>
</tr>
<tr>
<td>d: digital</td>
<td>pertaining to the fingers</td>
</tr>
<tr>
<td>f: scapular</td>
<td>shoulder blade region</td>
</tr>
<tr>
<td>e: patellar</td>
<td>anterior aspect of knee</td>
</tr>
<tr>
<td>b: calcaneal</td>
<td>heel of foot</td>
</tr>
<tr>
<td>c: cephalic</td>
<td>pertaining to the head</td>
</tr>
</tbody>
</table>

2. Indicate the following body areas on the accompanying diagram by placing the correct key letter at the end of each line.

Key:

- a. abdominal
- b. antecubital
- c. axillary
- d. brachial
- e. cervical
- f. crural
- g. femoral
- h. fibular
- i. gluteal
- j. inguinal
- k. lumbar
- l. occipital
- m. oral
- n. popliteal
- o. pubic
- p. sural
- q. thoracic
- r. umbilical

3. Classify each of the terms in the key of question 2 above into one of the large body regions indicated below. Insert the appropriate key letters on the answer blanks.

| a, e, i, j, k, l, m, o, q, r | 2. Axial |
| b, c, d, f, g, h, n, p | 1. Appendicular |
Body Orientation, Direction, Planes, and Sections

4. Describe completely the standard human anatomical position. **Standing erect, feet together, head and toes pointed forward, arms hanging at sides with palms forward.**

5. Define section: **A cut made along a body plane.**

6. Several incomplete statements are listed below. Correctly complete each statement by choosing the appropriate anatomical term from the key. Record the key letters and/or terms on the correspondingly numbered blanks below.

   Key:  a. anterior  d. inferior  g. posterior  j. superior 
   b. distal  e. lateral  h. proximal  k. transverse 
   c. frontal  f. medial  i. sagittal

   In the anatomical position, the face and palms are on the **1** body surface; the buttocks and shoulder blades are on the **2** body surface; and the top of the head is the most **3** part of the body. The ears are **4** and **5** to the shoulders and **6** to the nose. The heart is **7** to the vertebral column (spine) and **8** to the lungs. The elbow is **9** to the fingers but **10** to the shoulder. The abdominopelvic cavity is **11** to the thoracic cavity and **12** to the spinal cavity. In humans, the dorsal surface can also be called the **13** surface; however, in quadruped animals, the dorsal surface is the **14** surface.

   If an incision cuts the heart into right and left parts, the section is a **15** section; but if the heart is cut so that superior and inferior portions result, the section is a **16** section. You are told to cut a dissection animal along two planes so that the kidneys are observable in both sections. The two sections that meet this requirement are the **17** and **18** sections. A section that demonstrates the continuity between the spinal and cranial cavities is a **19** section.

7. Correctly identify each of the body planes by inserting the appropriate term for each on the answer line below the drawing.

![Diagram](image1)

- **median (mid-sagittal) plane**
- **frontal plane**
- **transverse plane**
8. Draw a kidney as it would appear sectioned in three different planes.

9. Correctly identify each of the nine areas of the abdominal surface by inserting the appropriate term for each of the letters indicated in the drawing.

   a. epigastric region
   b. right hypochondriac region
   c. left hypochondriac region
   d. umbilical region
   e. right lumbar region
   f. left lumbar region
   g. hypogastric (pubic) region
   h. right iliac region
   i. left iliac region

Body Cavities

10. Which body cavity would have to be opened for the following types of surgery? (Insert letter of key choice in same-numbered blank. More than one choice may apply.)

   Key:  a. abdominopelvic  c. dorsal  e. thoracic
         b. cranial  d. spinal  f. ventral

   1. surgery to remove a cancerous lung lobe
   2. removal of the uterus or womb
   3. removal of a brain tumor
   4. appendectomy
   5. stomach ulcer operation
   6. delivery of pre-operative “saddle” anesthesia

11. Name the muscle that subdivides the ventral body cavity. diaphragm
12. Which organ system would not be represented in any of the body cavities? **Skeletal, muscular, integumentary**

13. What are the bony landmarks of the abdominopelvic cavity? **Dorsally, the vertebral column; laterally and anteriorly, the pelvis**

14. Which body cavity affords the least protection to its internal structures? **Abdominal**

15. What is the function of the serous membranes of the body? **The serous membranes produce a lubricating fluid that reduces friction as organs slide across one another or against the cavity walls during their functioning.**

16. A nurse informs you that she is about to take blood from the antecubital region. What portion of your body should you present to her? **Your arm (the anterior surface of the elbow joint).**

17. The mouth, or oral cavity, and its extension, which stretches through the body to the anus, is not listed as an internal body cavity. Why is this so? **The cavity (lumen) of this digestive tube is continuous with the external environment.**

18. Using the key choices, identify the small body cavities described below.

   Key:  
   a. middle ear cavity  
   b. nasal cavity  
   c. oral cavity  
   d. orbital cavity  
   e. synovial cavity

   1. holds the eyes in an anterior-facing position  
   2. contains the tongue  
   3. lines a joint cavity  
   4. houses three tiny bones involved in hearing  
   5. contained within the nose

19. On the incomplete flow chart provided below:

   - Fill in the cavity names as appropriate to each box.
   - Then, using either the box numbers or the name of the cavity, identify the descriptions on the following page. (Some may require more than one choice.)
1: dorsal  a. contained within the skull and vertebral column
8: pelvic  b. contains female reproductive organs
2: cranial  c. the most protective body cavity
4: ventral  d. its name means belly
5: thoracic  e. contains the heart
7: abdominal  f. contains the small intestine
5: thoracic  g. bounded by the ribs
6: abdominopelvic h. its walls are muscular