

# Kinesiology

## I. Amphiarthrodial -

Synarthrodial - vertebrae

diarthrodial

Example (1) ~~of~~ articulation of the bones of the shoulder (humerus & scapula) and the articulation of the hip bone & femur

II.

1. Arthrodial - gliding joint
2. Condylar - part of the gliding and the adjacent convex surface.
3. Enarthrodial - Ball & socket
4. Ginglymus - hinge joint
5. Reciprocal reception - saddle joint
6. Trochoid - Pivot joint

third on next page

III

In a typical vertebra there are ~~two~~ ~~two~~ transverse processes and one spinous process. The bones extremely small and round in shape with these processes which I just mentioned. It articulates with the adjoining vertebrae. There is very little movement in a single articulation but a more with them all together. There are fassa or depression for this articulation.



# Ann Scipis

III The the superior is located on the the superior side of the vertebral cord is the shortest & smallest of the two. The inferior is rather long & sharp on its end is in the inferior part of vertebral V. of lumbar region

IV } Hip Bone  
1. pubis  
2. ilium - superior part  
3. ischium

Each make up about  $\frac{1}{3}$  of the the acetabular

VII. The ilio-femoral ligament is the Y ligament. It is a cross the joint seat back of the pelvis and femur together. Cause of tilting of the pelvis. When walking it is tilted forward. Some people do not give much att. to this ligament but it is very important.

VIII. The auto-nomic is made up of the sympathetic and the parasympathic. out to side are 3 groups of ganglion. The sympathetic some fibers end in the first of the parasympathetic go to the rest.

The cranial are nerves from the cranial part of the nervous system they send nerves into the cranial plexus and part of the head region.

The cerebro-spinal nerves



Kinesiology

I. Synarthrodial - without movement

Amphiarthrodial - freely movable.

Diarthrodial - partially movable

II. 1. arthrodial - any joint which has gliding movement

2. condyloid - elbows + knees

3. enarthrodial - a ball and socket

4. ginglymus -

5. reciprocal reception - thumb joint articulation

6. trochoid -

III. Locate and describe the superior and inferior

articular processes of a typical vertebra.

Well, each vertebra articulates with the vertebra ~~above~~ directly above or below it so the shape, size, the depth of the grooves etc would have to allow for articulation of the adjacent vertebra. There would be no sudden change in size.

IV. A typical vertebra -

I. Possibly near the ilio sacral articulation or in the lumbar region.

VI. 1. pubis

2. ilium

3. ischium

The acetabular cavity is about in the middle of the pelvic girdle, that is about  $\frac{1}{3}$  of the cavity is part of the pubis,  $\frac{1}{3}$  is the ilium and  $\frac{1}{3}$  the ischium.

VII. The ilio femoral ligament is a strong ligament which passes through the groin and the line passes about the acetabular cavity. This ligament has something to do with holding the femur



Marcell Eno  
Kinesiology

in the otoculular cavity.

viii The nervous system is made up of the central nervous system and the autonomic system. The central system is made up of the brain and cord and the autonomic is made up of a chain of ganglia which are outside of the cord. As a stimulus passes through the cord, over a synapse (possibly) into the posterior horn of the cord it takes the regular course but the autonomic is sort of a side road. The autonomic as I see it isn't under conscious control because it has control of digestion, respiration etc while the central nervous system has control of our motor responses ~~just~~ such as drawing ones hand from a hot stone when one feels the heat.



I. Diarthroidal - arm in shoulder  
Synarthroidal - sutures  
Amphiarthroidal - hip joint

II 1. arthrodial - gliding joint  
2. condyloid -  
3. Enarthrodial - ball & socket  
4. ginglymus - hinge  
5. reciprocal reception - saddle joint of thumb  
6. trochoid - pivot joint

III The superior articulation

IV A small bone that is rather round in shape. It has three processes. Two transverse processes and a spinous process. A fossa or depression in either side for articulation with the adjoining vertebra.

V ~~Between lumbar vertebra~~ In the lumbar region.

VI  
Ilium  
Ischium  
Pubis



VII The iliofemoral of Y-ligament cuts across the joint so as to lock the pelvis & femur when in alignment. When supporting body weight as in walking it tilts the pelvis forward. On the head of the femur it inserts and originates on the pelvic bone

VIII The cranial part of the nervous system functions in the brachial plexus and the nerves of head & neck.

The autonomic nervous system is made of the sympathetic and parasympathetic chains. The autonomic system lies outside the spinal cord and is made up of ganglia. The autonomic is connected to the other part of the system lying with the cord by the white & gray rami communicantes. The autonomic system stimulates the stomach, intestines, smooth muscles, etc.,

The cerebrospinal system is found within the cord and innervates the lumbar plexus. These systems cranial & cerebro-spinal function as motor & sensory nerves.



Niven, Elizabeth

- I
1. Synarthrodial - sutures - gomphoses
  2. Amphiarthrodial - permanent and temporary (cartilage)
  3. Diarthrodial - ginglymus - condyloid, <sup>syn-</sup>arthrodial

- II
1. arthrodial - gliding
  2. condyloid - hinge - jaw
  3. enarthrodial - ball & socket
  4. ginglymus - ~~joint~~ finger
  5. reciprocal reception - saddle joint of thumb
  6. trochloid - hinge - (elbow)

~~III~~ ~~Locate~~

~~Superior articular process is the atlanto-occipital joint located at the neck above the first superior transverse process.~~

~~The inferior process is the ilio-iliac joint.~~

III The superior and inferior articulations are called costal articulations. There is a "disk" between each vertebra which makes the general curve of the spine. )

IV A typical vertebra has two transverse processes and one spinous process. The spinous processes vary in length and are not pointed straight out but are at an angle

V The sacro iliac joint

VI ilium  $\frac{2}{5}$   
ischium  $\frac{1}{5}$   
pubis  $\frac{2}{5}$

VII The ilio femoral ligament arises, or originates on the ~~pubis~~ pelvic bone and inserts on the <sup>head of the</sup> femur. Its action is to



tilt the pelvis forward and when the pelvis is in the correct position it locks. The ilio femoral band and Y-ligament also lock when the leg is straight, thus helping the support of the body.

VIII The nervous system is made up of the <sup>Cerebrospinal</sup> ~~Cerebral~~ System and the Autonomic System.

The Cerebrospinal is the motor system and conducts the sensory impulses thru the spinal cord, thru the neurones and back to the part where a reaction occurs. This system is not automatic and is carried on only by stimuli.

The Autonomic Nervous system is made up of two parts, the Sympathetic and the Parasympathetic Nervous systems. The para-sympathetic system is automatic and takes care of reflexes of the eye, digestion of food, etc. The sympathetic is found along a chain just out side of the spinal cord.



## Kinesiology

1. a. Diarthroidal - Freely Movable  
b. Amphiarthroidal - Slightly Movable  
c. Synarthroidal - Immobile
2. a. Arthrodial - Fingers  
b. Condyloid - Wrist  
c. Enarthroidal - Hips & shoulder joints  
d. ginglymus - Elbow  
e. reciprocal reception - thumb  
f. trochoid - Articulation between finger & metacarpals.
3. the articular processes - there is a superior articular process on each side of upper surface of the vertebrae. Also there is an inferior articular process on each side of lower surface of the vertebrae. These processes are round or oval in shape and are slight depressions in the vertebrae.
4. A typical vertebrae consists of a round body, two transverse processes (one on each side of body), a spinous process which extends back & downward, and the articular facets.
5. Lowest point of movement in spine is at the lumbo-sacral articulation.
6. Acetabular cavity is comprised of the ilium, the sacrum, & the ~~as~~ pubis. Each bone comprises about one-third of the cavity.
7. The femoral ligament -  
origin - Anterior crest of ilium  
insertion - head of femur



8. The nervous System is composed of the brain & spinal cord. The cord gives off nerves all along which innervates the various muscles and tissues & organs of body.

The cranial - supplies head.

The cerebro spinal -

Autonomic System is composed of the sympathetic & parasympathetic.

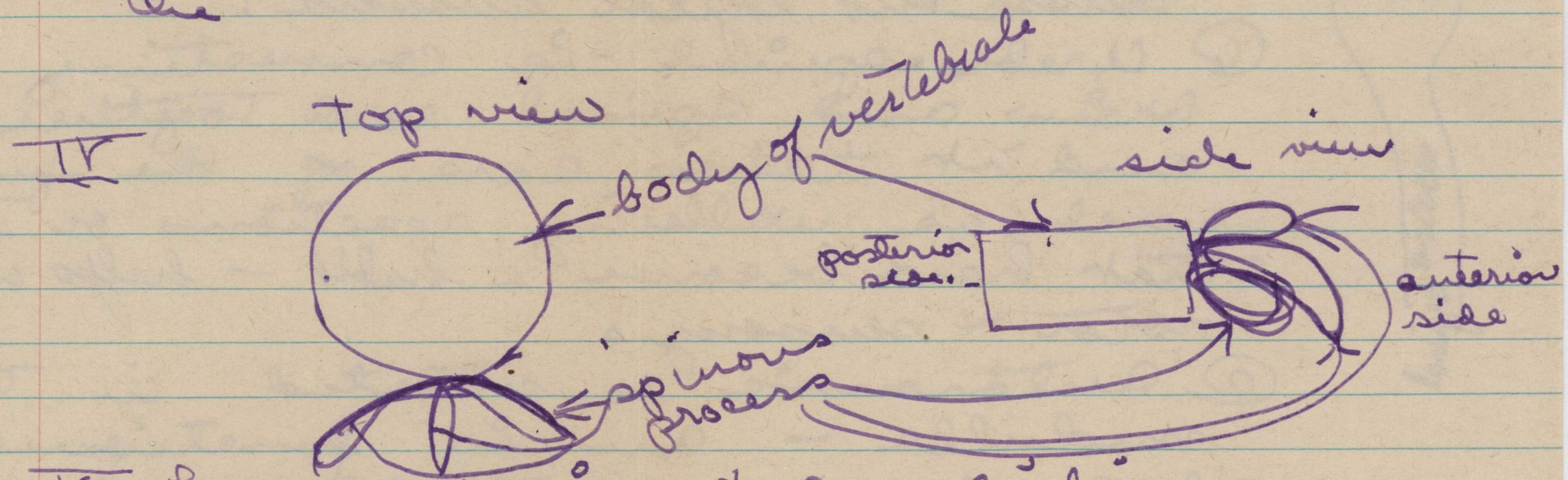
Kinesiology  
Marge Barker  
May 15, 1945  
9



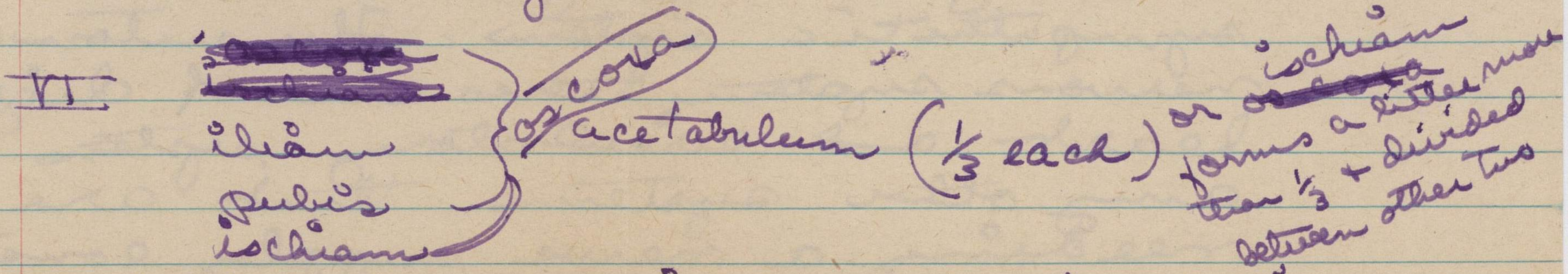
- Jean Boardman
- I 1. Synarthrodial - Immoveable joint  
 2. ~~Enarthrodial~~ <sup>Euar</sup>arthrodial - slightly moving joints  
 3. Diarthrodial - free moving joints

- II 1. arthrodial - finger joints  
 2. condyloid - wrist joints  
 3. Enarthrodial - hip & shoulder joints  
 4. ginglymus - elbow joints  
 5. reciprocal reception - saddle joint in thumb  
 6. trochoid - feet

III superior articulation is toward the head and are connected with the spine above by spinous processes - the inferior articular process is toward the



V Lumbar region & Sacral iliac



VII iliofemoral ligament is found in the ~~thigh~~ <sup>pelvic region</sup> it is ~~inserted~~ connected to the muscles in ilium and inserts in the femur bone on the thigh.



Jean Boardman

May 15, 1945

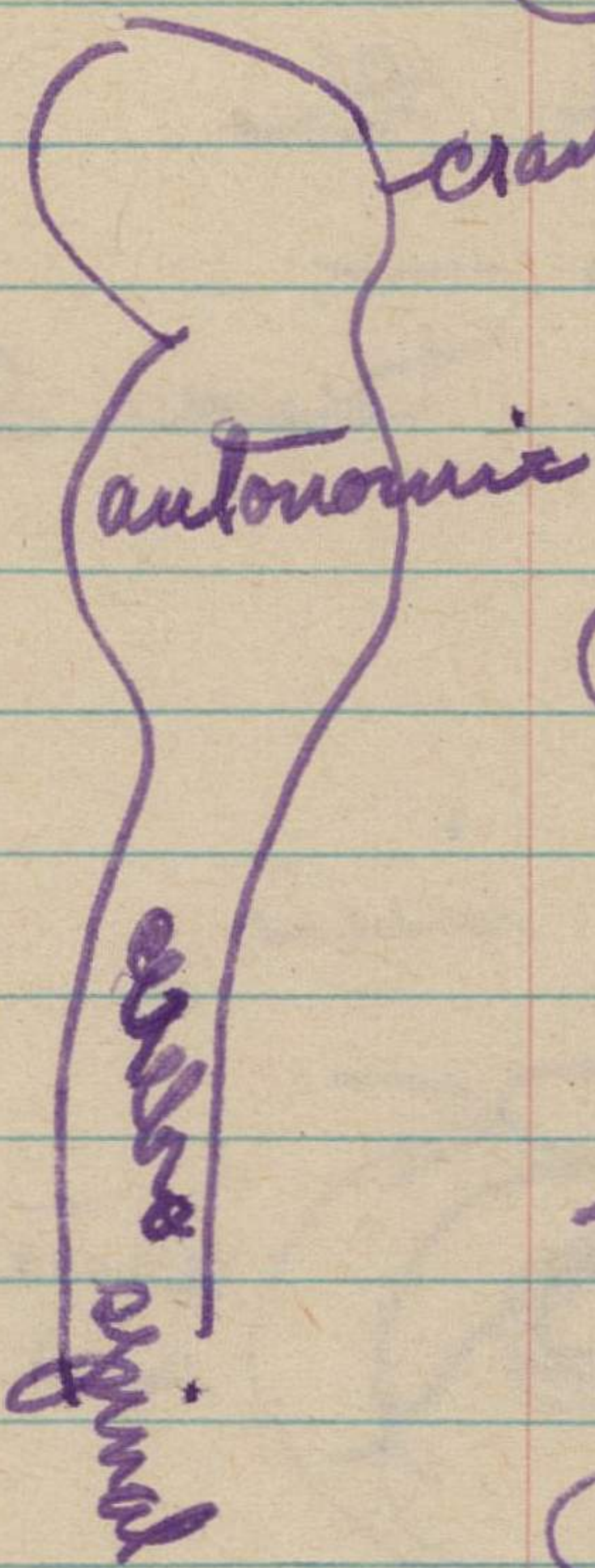
Kinesiology

VIII Describe the nervous system - the cranial  
- the cerebro-spinal and the autonomic

@ The cranial is situated in the skull  
and is the most developed of the  
brains - it has our memory and  
past experiences - our mind that  
thinks but logical answers.

@ Cerebro-spinal - is connecting the  
brain and spinal cord together  
and it takes care of the functions  
such as walking, reactions or things  
that have become a habit - helps with  
motor + sensory.

@ Autonomic is situated in the  
medulla - an is functioned  
through a sympathetic and para-  
sympathetic systems. The autonomic  
nervous system takes care of digestive  
heart and circulatory system and  
any other systems that are ~~being~~  
needing a nerve supply constantly  
without our telling ourselves to  
stop + start the heart or digestion etc.





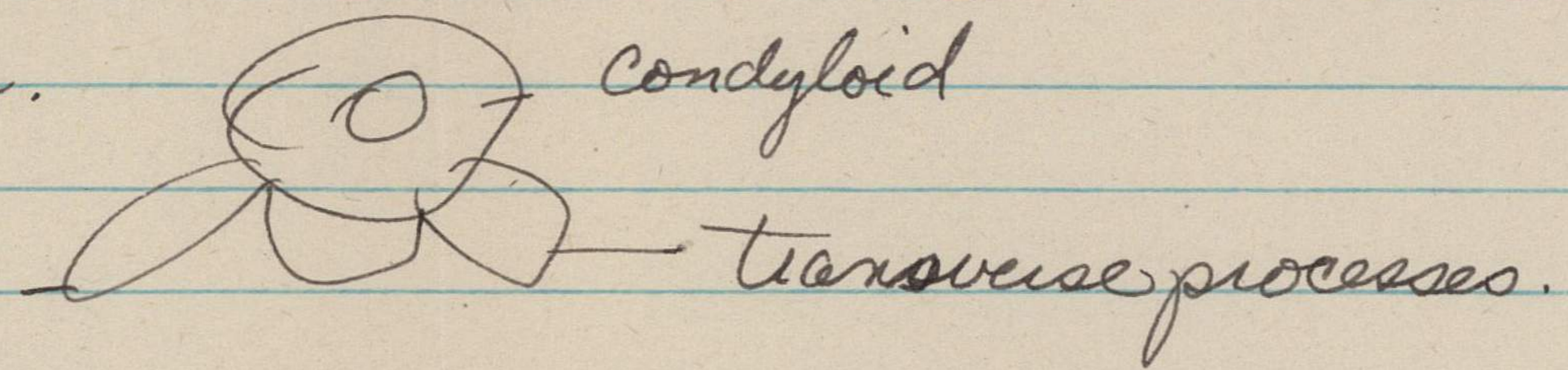
Virginia Neal

I. Synarthrodial, <sup>amphiarthrodial</sup> ~~amphiarthrodial~~ & diarthrodial.

- II 1. arthrodial - gliding joint
- 2. condyloid - 1<sup>st</sup> segment of fingers
- 3. enarthrodial - ball & socket
- 4. ginglymus - hinge joint
- 5. reciprocal reception - saddle joint (thumb)
- 6. trochoid - pivot joint

III A typical vertebra located in the backbone. ~~There are~~ ~~are~~ discs between each vertebra. The superior & inferior articular processes of a typical vertebra are disc-like cartilaginous bones whose ends are narrower than the middle so that the vertebra may roll causing the back to bend. There are 2 transverse & a spinous process ~~so~~ which aids side to <sup>side</sup> articulation.

IV A typical vertebra includes two transverse & a spinous process.



V ~~Sacroiliac~~ Lumbosacral region - Could be sacroiliac.

VI Ilium, ischium & coccyx bones which fuse together and form one bone by about the age of eighteen. The ilium part takes of  $\frac{2}{3}$ 's & the other  $\frac{1}{3}$ .

VII The iliofemoral ligament is non-elastic (as are all ligaments). It originates on coccyx and inserts on the upper part of the femur. Its function is in the raising of the ~~hip and~~ thigh.



VIII

The cranial part of the nervous is located in the head and acts as a receiver & involuntary nerve ~~flow~~ stimuli. The cerebri is the receiving center of automatic impulses. The central part of the nervous system is located in the spine. The autonomic N.S. consists of sympathetic & parasympathetic nerves. The autonomic sympathetic is thoracic-lumbar outflow. Parasympathetic is cranial-sacral outflow. Sympathetic goes 6-12 thoracic. The ganglia are arranged in ~~set~~ central, collateral + peripheral

Virginia Neal



I - Synarthrodial -  
Anarthrodial -  
Diarthrodial -

II - Identify the 6 types of freely  
Movable joints:

1. Ankle
2. Knee
3. Elbow
4. Wrist
5. Fingers & toes
6. Neck


III Locate & describe the superior & inferior  
articular processes of a typical vertebrae.

IV Describe a typical vertebrae.

V Where is the lowest point of move-  
ment in the spine? - the last vertebrae  
of the spine.

VI - Name the 3 bones comprising  
the acetabular cavity & tell the fraction of  
the acetabulum goes to each bone of the  
pelvic girdle.



III- The spine is the center of the nervous system, the spinal cord is the center of all responses. When the <sup>nerve</sup> impulse goes to the cranial nerve, the afferent carrying it + the synapse is made + the efferent nerve carries the response. The autonomic system (sympathetic) works antagonistically to the nervous system only in that it serves as a balance to check the nervous system. From the spinal cord the autonomic branches out  in ganglion carrying the nerve impulses + response to all parts of the body.



VII - Describe & give the origin & insertion of the iliofemoral ligament. Describe its function as you know it from your limited knowledge.

VIII - ON BACK OF PAGE - 1 -

My Dear Mr. Allen:

At this time I find my knowledge exceedingly limited, having had my anatomy 8 years ago! - however I shall renew that knowledge this summer.

However, from our late lectures in here I have learned some valuable information for my future use - how to treat a BABY FOR COLIC & "BURP" the BABY (which I tried ON A "BRAND NEW" BABY SAT. - regards to your technique). AND, how to prevent liver trouble - Bef the much famous lemon & egg drink in the morning - Oh yes, one more thing, to TOAST my Feet if I have the cramps. (also works) - so, if I haven't know when the "ginglymus" is 10 years from now - I'll still know 3 worth while solutions to every day problems!

Mrs. Madeline Jennings.

P.S. Also forgot my text book, so that really did limit my knowledge.



Madine Jennings  
Kinology

May - 15 -



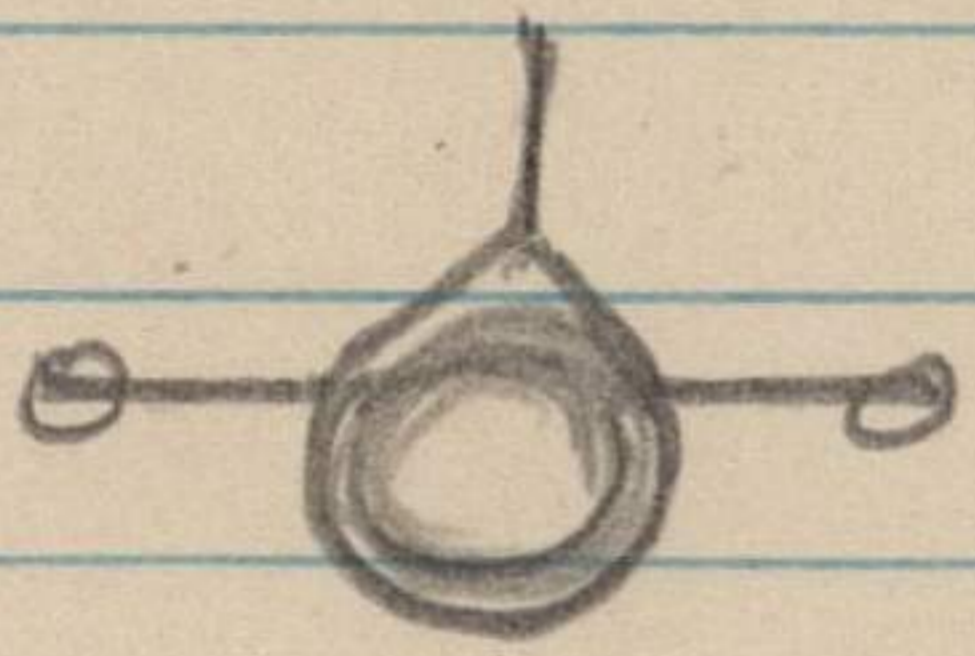
1. a. Diarthrodial - freely movable - shoulder
- b. Amphiarthrodial - slight movable - ~~vertebrae~~ <sup>vertebrae</sup>
- c. Synarthrodial - - no movable - skull

2. ① arthrodial - fingers
- ② Condylrod - wrists
- ③ enarthrodial - ball & socket
- ④ ginglymus - elbow joint
- ⑤ reciprocal reception - saddle joint (thumb)
- ⑥ trochoid - 1st phalanx & metacarpal

3. The articular processes are the the inferior and superior flat facets.

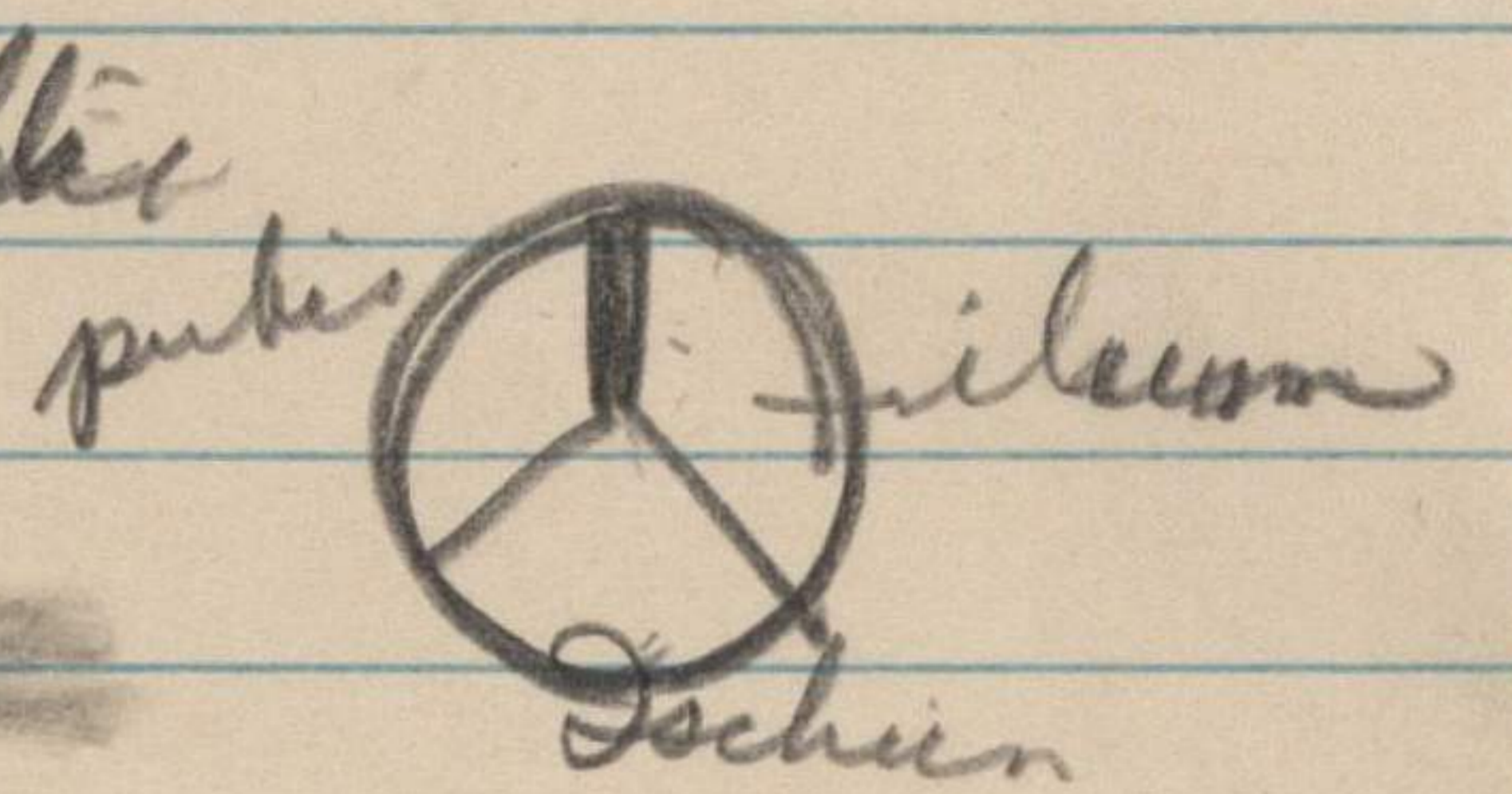


4. A typical vertebrae is one has 2 transverse processes & a spinous process. and the body of the vertebrae.

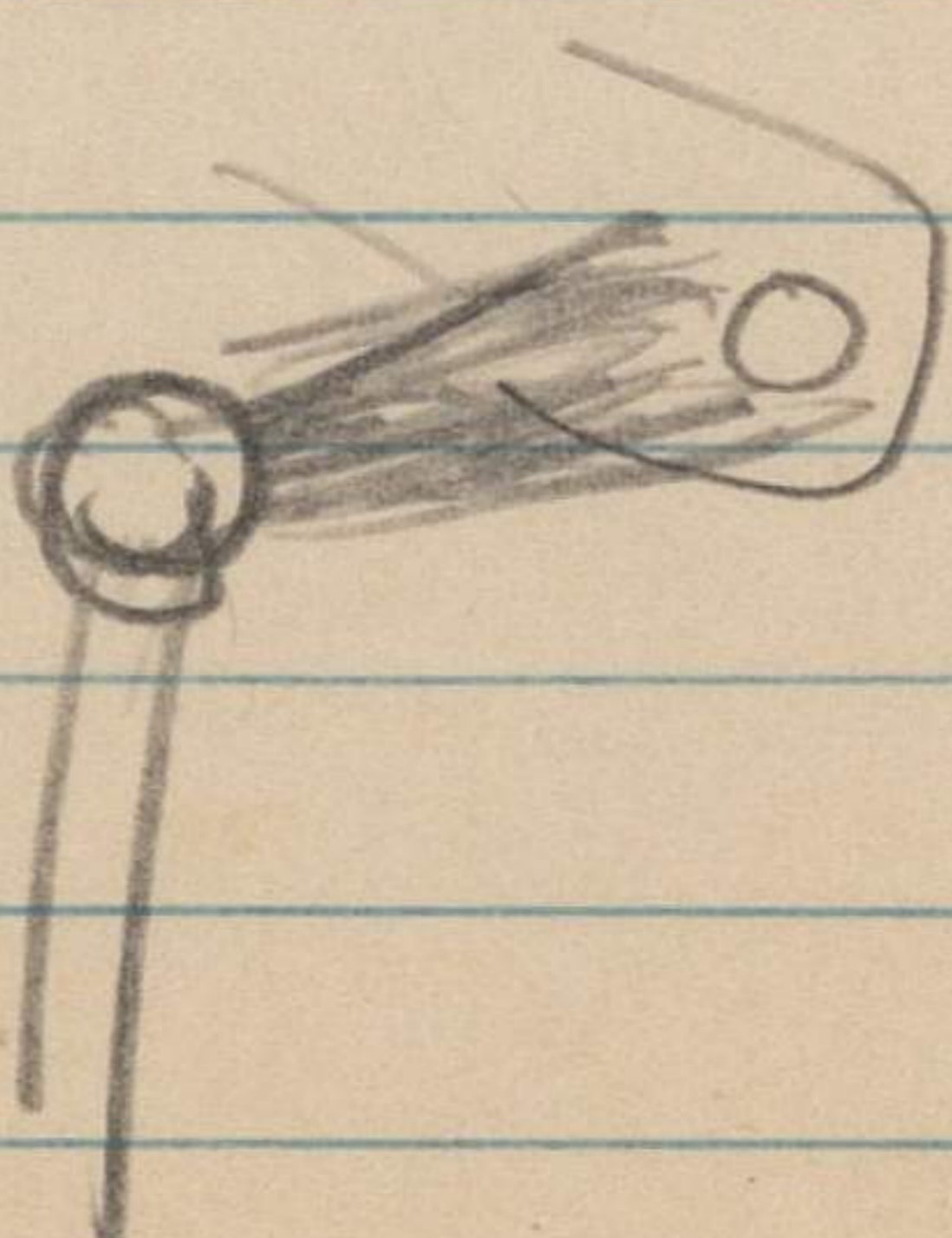


5. In the lumbar region.

6. ilium } as coxa  
ischium }  
pubis }  
acetabulum



7. Origin - from the anterior part of the pubis  
Insertion - insert onto head of the femur through the acetabulum.



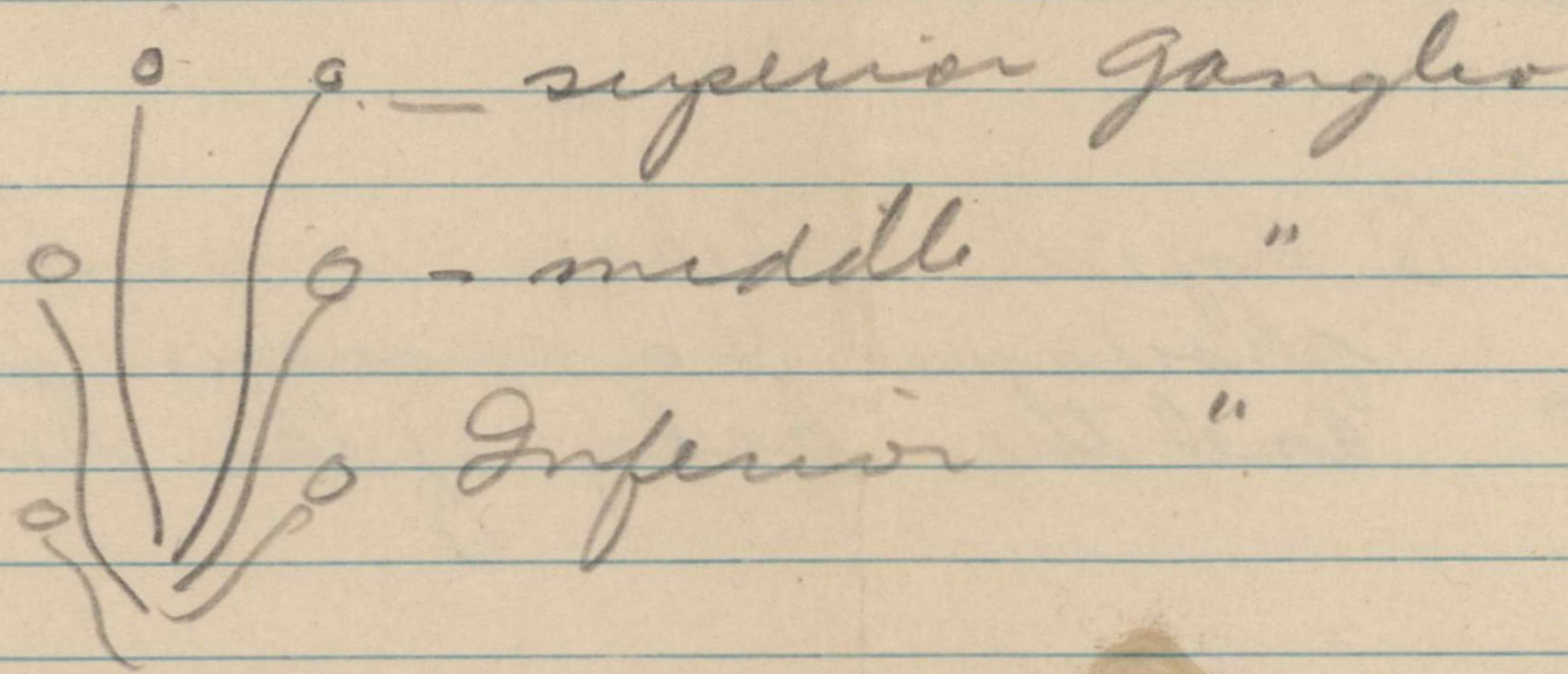
The ligament helps hold the femur in the acetabulum cavity. Also helps in the movement.



8. Nervous system -  
Autonomic controls blood supply  
ganglionic chain lying anteriorly  
on anterior body of vertebrae  
made up of 2 parts - parasympathetic  
& sympathetic

Cranial

Cerebrospinal



Lavone Jackson

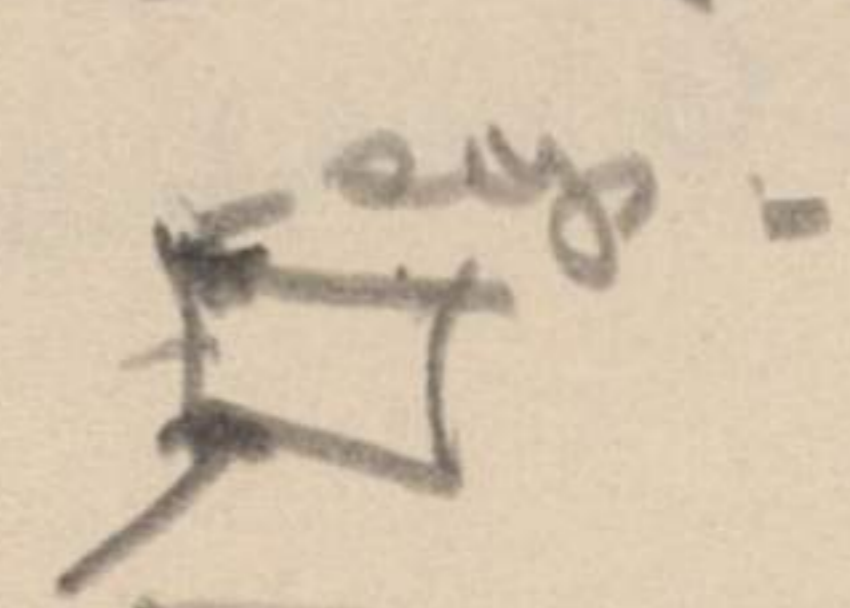


Zim merman

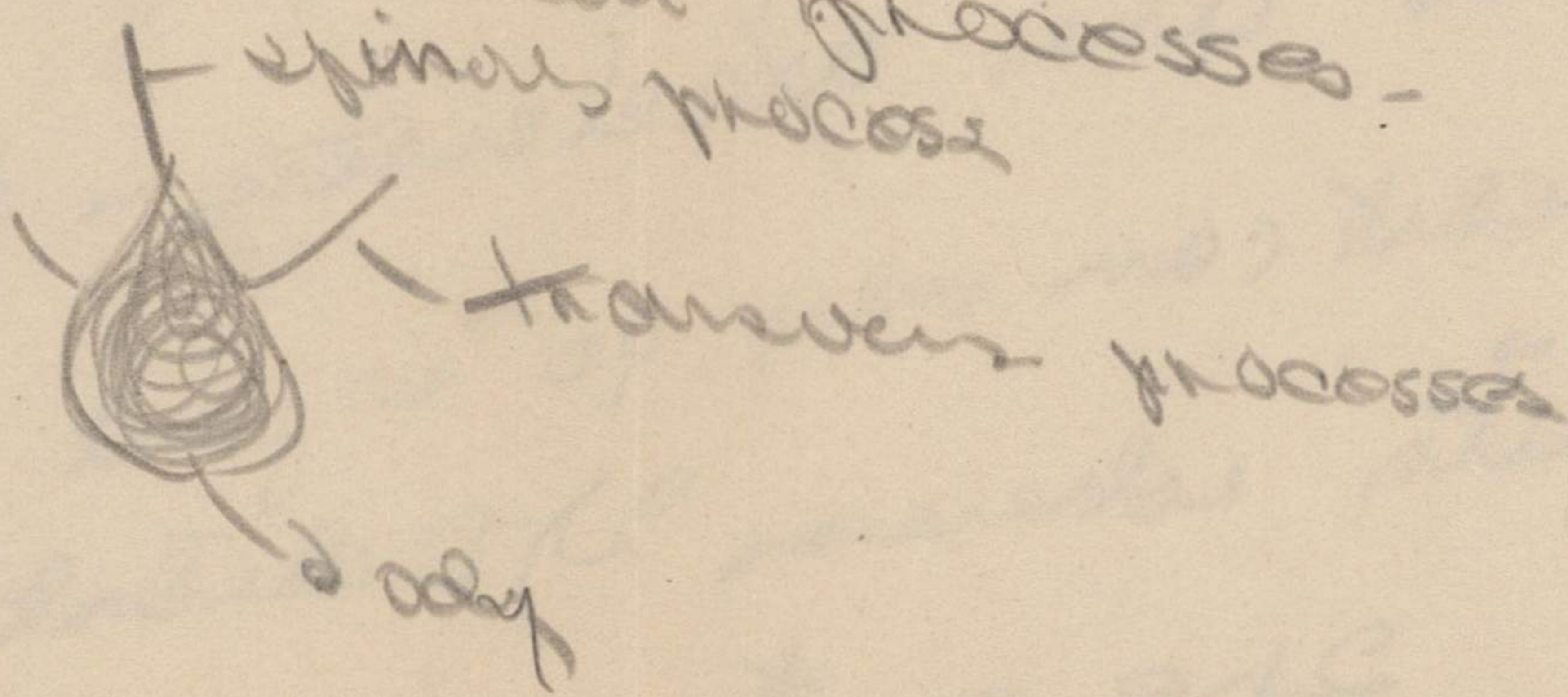
1. Diarthrodial - freely movable <sup>ginglymus</sup> (elbow, out)  
Synarthrodial - skull.  
Amphiarthrodial - Spinal column -

2.
  1. Arthrodial - fingers -
  2. Condylloid - wrist -
  3. Enarthrodial - Ball & socket - Shoulder -
  4. Ginglymus - elbow (hinge) joint.
  5. Reciprocal reception - saddle joint. (thumb)
  6. Trochoid - Dist phalanx of metacarpal -

3. flat - facets - the superior on the top of the verte. & the inferior on the bottom of the verte.



4. Atypical vertebra has 2 transverse processes -  
the spinous process - the body of the vertebra  
and the articular processes.





5. Lumbar region of the spine -

6. Ilium  
ischium  
pubes.



each take about 1/3. however pubes. is a little larger proportion. -

7. origin - anterior portion of the pubis -  
insertion - Head of femur (from acetabulum)

Function - allows movement without dislocation  
keep head of femur in acetabulum.

8. The autonomic nervous system is made up of parasympathic + sympathetic - one inhibits the other accelerates. For example - the heart can only go so fast due to the inhibits whereas if I didn't I would wear out - The autonomic control systems such as heart, lungs, dig. respiratory, glands etc. - the cerebrospinal located in



spinal column - makes up spinal cord. <sup>Zimmerman</sup> has  
control over voluntary movements. It relays  
messages to the cranial nerve division.



Zimmerman

May 15.



# Kinesiology

Velma Stumbo

I Name and give an example of each of the three types of articulations of the body.

\*Synarthrodial - gomphoses, teeth, sutures of the skull.

\*Diarthrodial - ball and socket of hip and shoulder.

\*Amphiarthrodial - Permanent cartilage in ribs and temporary epiphyseal centers of the bones.

## II

(1) arthrodial - Cartilage present as in the teeth and skull.

(2) Condylloid - form a condyle which they rotate around - as in the fingers at the proximal phalanges.

(3) Enarthrodial. spinal column.

(4) Ginglymus - hinge joint of elbow or knee.

(5) Reciprocal reception - Ball and socket of the hip and shoulder.

(6) trochoid - ~~bones~~ the carpals of the hands and feet or the gliding joints.

III Locate and describe the superior and inferior articular process of a typical vertebrae.

The superior articular process is slightly convex and the inferior is concaved for articulation of the one below it. The superior is at the top and the inferior at the bottom. Between these articulations there are cartilaginous pads which allow for the flexibility of the spinal column.

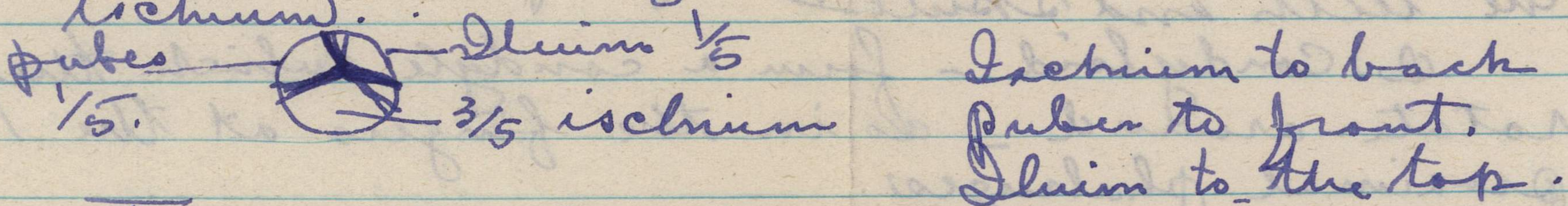


IV Describe a typical vertebrae.

A typical vertebrae has a superior and inferior articular process, two transverse process which go out to the sides of the vertebrae proper. At the dorsal part there are spinous processes (which may be palpated at ~~the~~ through the back) It has at the anterior part a hole through which the spinal cord passes.

The lowest point of movement of the spine is at the lower lumbar and higher sacral vertebrae.

V Name the three bones comprising the acetabular cavity → \* ilium, ischium, pubes.



VI Describe and give the origin and insertion of the ilio femoral ligament.

Origin from Superior iliac spine, Insertion into the ~~anterior~~ pubis the head of the femur.

It holds the femur into place. If the weight of the body is thrown onto the femur in such a way as the ligament is strained or in heavy lifting done in the wrong way the ligament is apt to cause trouble by stimulating (to a point of pain) the nerves in the ~~femur~~ thigh and leg.

VII Describe the nervous system - the cranial, the cerebrospinal and the autonomic in your own words.

Cranial comprises the brain or the executive of the ~~the~~ unit.

Cerebrospinal represents the government and congressmen which consists of the spinal cord and the spinal nerves.

Autonomic is the receiving line in the system consisting of the returning nerve fibers.



I Synarthrodial, diarthrodial, amphiarthrodial.  
(Sutura, in head) (but mouth, knee joint) (freely movable, wrist)

II (1) Arthrodiail - gliding joint, (wrist)  
(2) Condylloid - Rotation, (Example in fingers)  
Enarthrodial - Socket joint (Shoulder region)  
Diphylymus - Hinge joint - ("Elbow" articulation of Humerus to the Radius & Ulna)  
reciprocal reception - Saddle joint  
Trochoid - Pivot joint

III The Superior & Inferior articular processes  
of a typical vertebrae.  
The Superior articulation is located  
inferiorly from the neck region, and the  
vertebral runs down inferiorly down  
the back region where it connects superiorly  
to the lumbar region.

IV a typical vertebrae has several articulations  
there are some of the different processes.  
A) Superior art. process. B) spinous process.  
(3) superior art. process.  
(3) anterior costal process.  
(4) transverse process.  
V In the lumbar region.

VI pubis, ischium, ilium. The function  
of the acetabular cavity is where  
the femur bone articulates in this form.

VII The iliofemoral ligament is located on  
the femur, which its origin is on the ex coxae  
and insertion on the lateral surface of the  
femur. The purpose of the ligament is to  
hold the femur in position with the acetabulum



Eugene Long

VIII The nervous system is composed of the autonomic, Sympathetic, Parasympathetic. In their nervous system there are what is called the motor nerves and the sensory nerves which run over the white and grey matter communicating when the impulses are taken

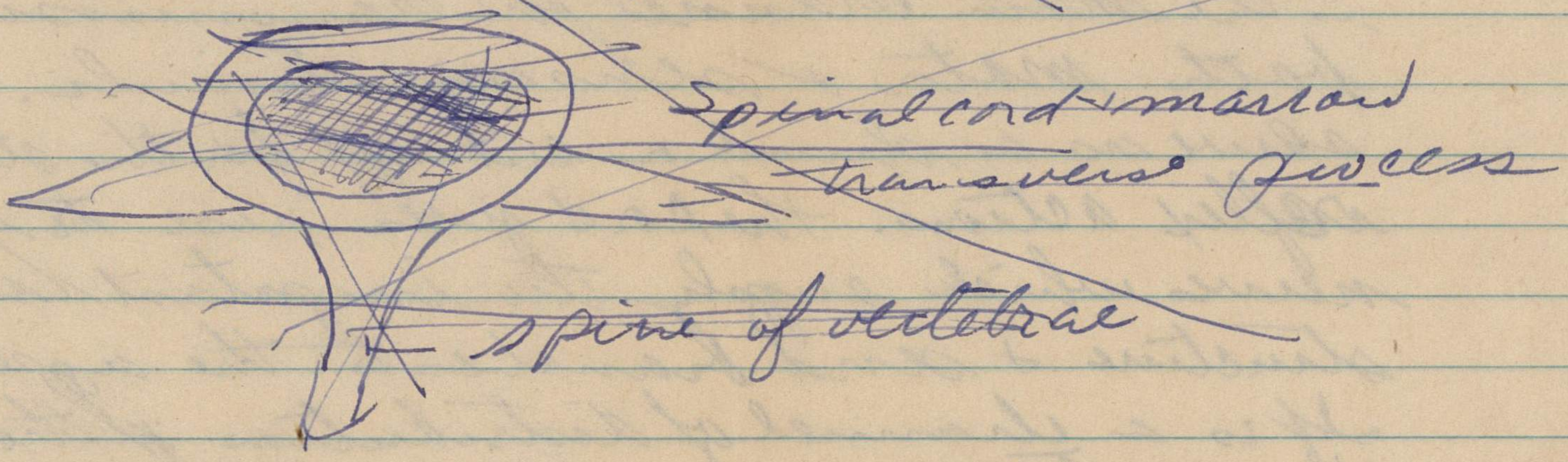


Elmer  
Kline

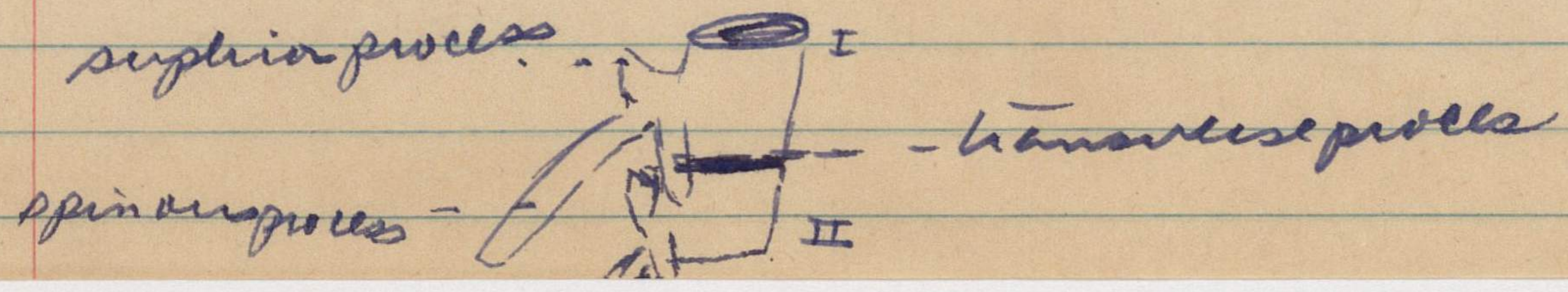
1. Synarthroidal - sutures of skull  
Amphiarthroidal - sacro-iliac  
Diarthroidal - shoulder joint
2. a. arthroidal - patella over knee joint (?) radius over ulna at distal end.  
b. Condylloid - ~~first segment of finger to~~ first carpal to meta carpal.  
c. humerus + glenoid fossa  
d. ulna + distal end of humerus  
e. thumb + ~~meta~~ carpal bone  
f. ~~skull atlas~~ axis + atlas.

on back 3.

~~the superior articular surface & the inferior one are oval surfaces padded with cartilage.~~



4. A typical vertebrae is a <sup>slightly</sup> flattened cylinder bearing 3 processes - 2 transverse spines and one posterior one. The lateral processes have a hole each to accommodate the nerve. The body of the vertebrae is composed of compact bone. The cavity within the vertebrae is, in life, filled to the spinal cord & marrow.





3. The superior & inferior processes of the vertebrae are projection superiorly & inferiorly from the base of the spinous process, these processes form a protection against ~~hyper flexion~~ hyper extension.

V The lowest pt. of movement in the ~~spine~~ spine is about the 3rd or 4th lumbar

VI pubis -  $\frac{1}{5}$  of acetabulum      Gliriv  
ischium -  $\frac{2}{5}$  "      "      Kline  
ilium -  $\frac{2}{5}$  "      "

VII. Dis-femoral ligament - from the external surface of the ilium to the internal surface of the head of the femur. It is a spiral band of inelastic fiber which binds the femur into the acetabulum.

VIII. The central nervous system is composed of the brain & the spinal cord. The brain is the ~~center~~ seat of deliberative thought & action. In this organ is the seat of consciousness. The spinal cord is the main channel for transmission of path motor & sensory stimuli. It may serve as a shunt or cut-off for the stimuli in reflex actions. The cord gives rise to spinal nerves which supply the important larger structure & send branches to the appendages. It is a channel of distribution of the nerves. The autonomic system is connected to the spinal system by rami communicantes. The autonomic carries gives the innervation for the processes essential to life that must continue in sleep as well as in consciousness - hence are nearly automatic - the control of the diaphragm, gastro-intestinal secretion & contractions etc.



# Kinesiology

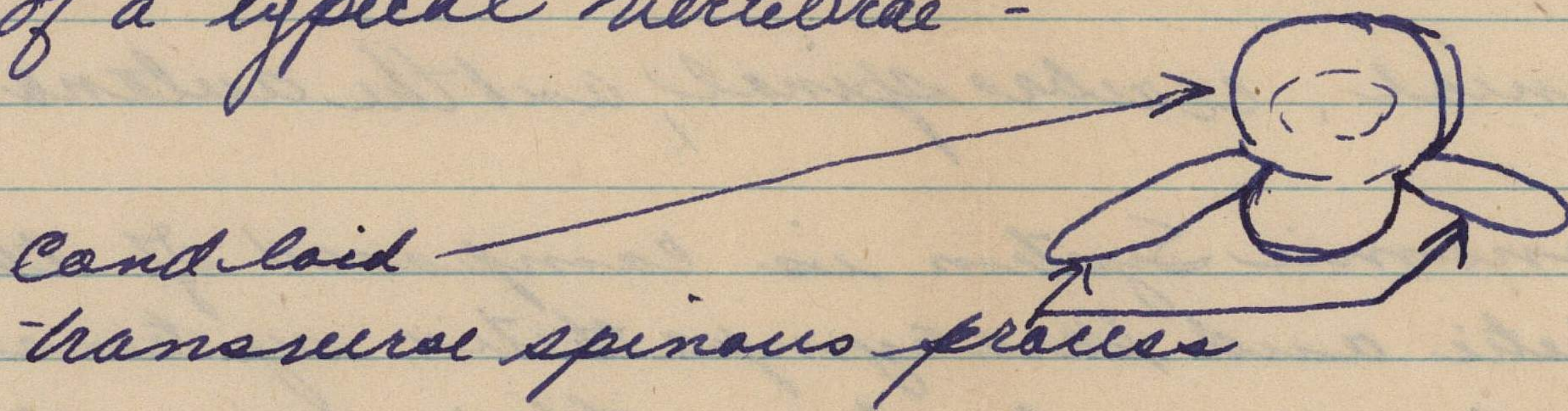
Louise McIntire

I. S. A. D.!

Synarthrodial, Amphiarthrodial, Diarthrodial

- II.
1. Arthrodial - gliding joint
  2. Condylloid - 1st segment of fingers
  3. Enarthrodial - ball and socket - femur & humerus
  4. Ginglymus - hinge joint
  5. Reciprocal reception - saddle joint - thumb
  6. Trochoid - pivot joint

III. The superior and inferior articular processes of a typical vertebrae -



IV. A typical vertebra has two transverse processes and a smooth condylloid surface rounded and fitted so as to hinge closely to the next vertebrae. The transverse processes as is the whole vertebral column for protection of the spinal nerves and also for to enable the body to bend freely and for support to the body skeleton.

V. The lowest point of movement in the spine  
Lumbar.

VI. The acetabular cavity is for the femur of the leg - composed of the ilium ischium and ~~pubis~~ or the pelvic bone.  
 $\frac{2}{3}$  ilium  $\frac{1}{3}$  ischium  $\frac{1}{3}$  ~~pubis~~

VII. The ilio femoral ligament is described as a Y ligament and attaches - origin - to the pelvic bone (pubis) and inserts on the greater trochanter of the femur bone - This ilio femoral ligament is



non-elastic and therefore when great strain or a sudden jerk is placed upon the femur or pelvis the ligament pulls forward or backward ~~pulling~~ <sup>tipping</sup> the pelvis at an angle. This may or may not press on a nerve if it does it may be very dangerous - Usually the person does not even realize the pelvis has been tipped. This may be shown by measuring the legs the interior or middle malleolus - (ankle bones) being equal the pelvic girdle has not been tipped - Pressure on the femur's greater trochanter tipping the leg outward and then pulled down firmly will usually spring the bone into <sup>normal</sup> position.

#### III: The Cranial, cerebro spinal, and the autonomic.

The Autonomic System is composed of the Sympathetic and Parasympathetic systems.

These systems each have their own specialized work and yet can't be separated from the Autonomic System as they are intimately connected.

The Cranial nerves go naturally to the Cranium and region of upper extremities. Synaptic connections carry messages to and from the brain center in medulla in the grey and white matter of the neuron. ~~ganglionic~~

The cerebro-spinal nerves run down the vertebral column and control reflex actions.

The autonomic system controls the nerves to the heart the cardiac.

Louis Prostie



I. Dearth

Kinesiology

Gene Roberts  
5/15/45



Jane Roberts

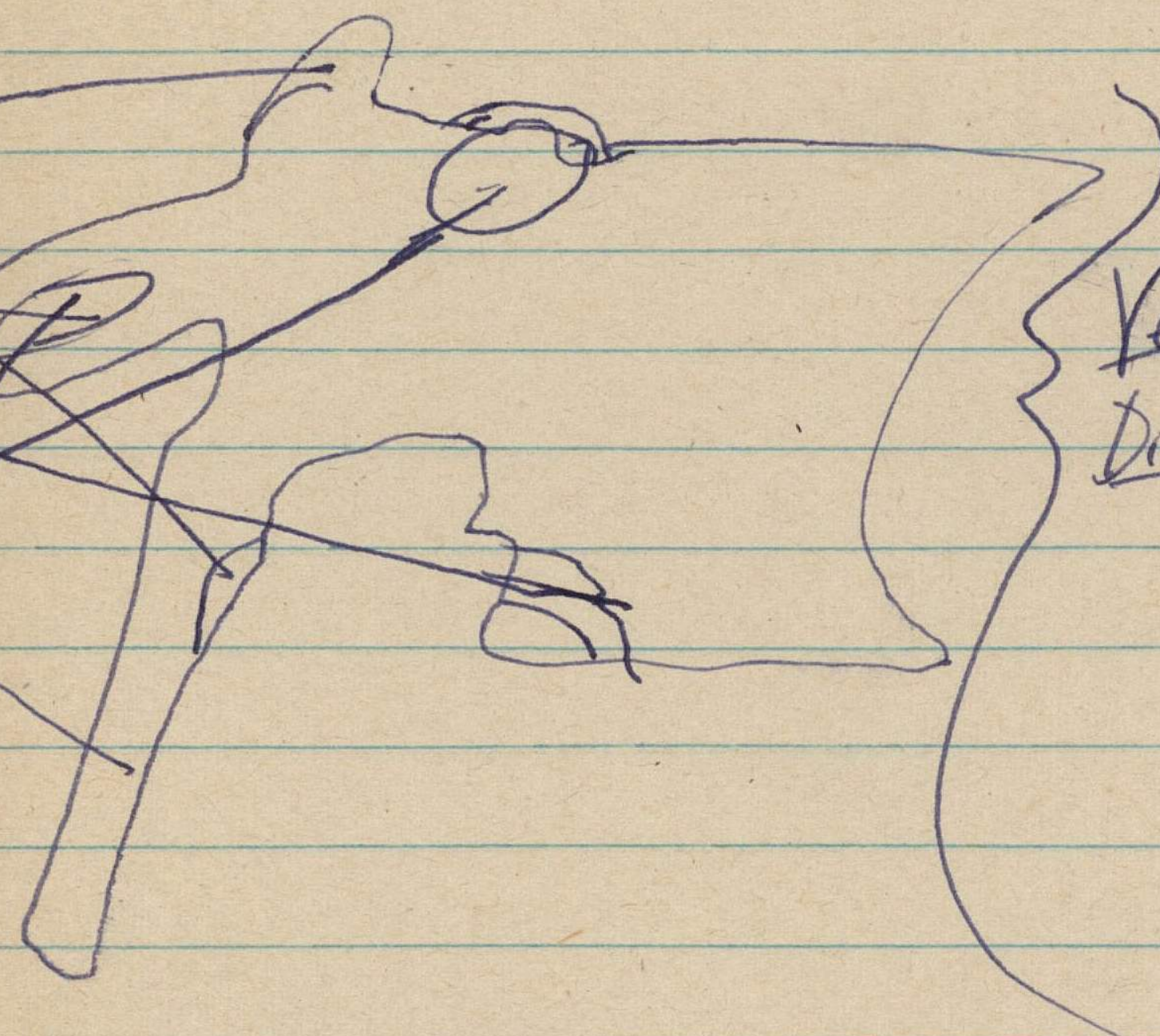
- I - Synarthrodial - Vertebrae (immovable)  
II - Amphiarthrodial - Ankle Joint (slightly movable)  
III - Diarthrodial - Knee Joint (Movable)

- IV - (1) Arthrodial - gliding joint  
(2) uniaxial - joint formed by a convex prominence & gliding over an adjacent surface.  
(3) ~~enarthrodial~~ <sup>synsphyranus</sup> - socket joint  
(4) ~~diarthrodial~~ <sup>synsphyranus</sup> - hip joint  
(5) reciprocal reception - saddle joint  
(6) trochoid - pivot joint

III No In question (no 4) the superior art. process is (no. 1) & inferior art. process is (no. 2)

IV spine has a no of articulations

- (1) Superior art. process
- (2) Inferior art. process
- (3) Transverse process
- (4) inferior costal process
- (5) spinous process
- (6) superior costal art.
- (7) costal art.



Vertebral Diagram

(V) Lumbar region.

(VI) Ilium, ~~ischium~~, ischium, pubis.

~~VII~~ VII - The iliofemoral ligament is attached to the head of the femur & connected to the pelvis.

Ilifemoral <sup>ligament</sup> when strained, will cause a tipping of the pelvis because of its inelasticity.

~~(VIII) The cranial supplies~~



*yes* (18) The saddle type of joint is a special arrangement found only in the thumb.

*no* (19) Adduction is a lateral movement away from the central plane of the body.

*no* (20) Abduction is a movement inward toward the central plane of the body.

V. (a) What do we mean by equilibrium? Give your most complete definition.

(b) Since it is impossible to understand the physical principles of total body action without understanding certain governing laws of motion, please give in detail the Newtonian laws: (1) the laws of inertia; (2) the laws of acceleration; (3) the law of reaction.

(c) The levers of the body frequently move in complete unison and with perfect timing in respect to their involved neighbors. For instance, when one climbs the stairs, one's weight is lifted by extension at three articulations simultaneously. Name the articulations and state generally what takes place in such activity at these articulations.

VI. (a) List four of the fundamental manipulative skills.

(b) Explain briefly the three principal types to which all manipulative skills belong.

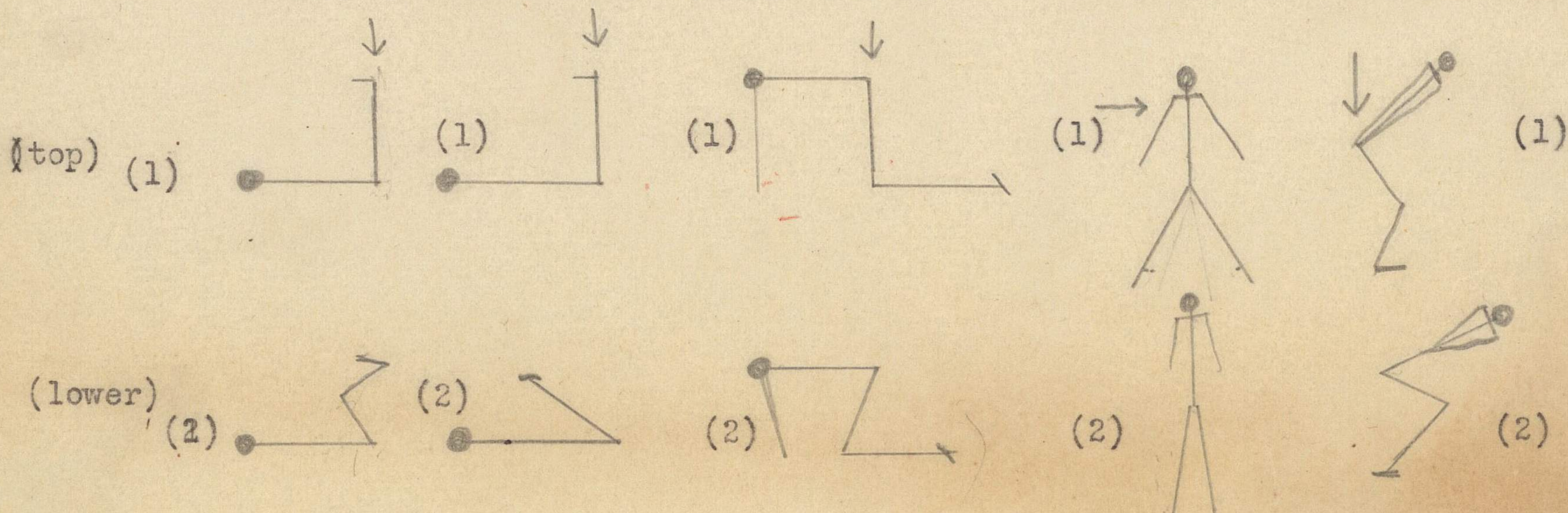
VII. In the field of selected sports state briefly the types of fundamental manipulative skills to which each of these sports belong, and give at least three general musts, either muscular or mechanical, for the successful performer of each sport. (If you prefer, substitute other sports with which you may be more familiar.)

(a) Archery

(b) Badminton

(c) Tug o' War

VIII. Each figure below represents the base for some couple balancing stunt. The arrow represents the weight line of the top performer. Why is the weight supported more easily by the top figure in each couple?





IX. (a) Since the spine is the keystone for the development of an upright posture, name four of its specific functions in this service to the human body.

(b) There are some 14 or 15 commonly recommended exercises for posture training. Name at least five such exercises and discuss briefly why each is effective.

X. List at least 5 home or occupational activities.

S



# Examination Questions

I (a) Define kinesiology and give its general relationships to certain other sciences.

(b) List at least three of its contributions to the betterment of teaching physical education.

II (a) Where, <sup>in the human body, is</sup> the location of motion?

(b) Where, the source of bodily movement?

III (a) Name the three general classes of joints to which all articulations of the body belong.

(b) Name and give one example each of the six types of freely movable joints.

IV Answer these questions yes or no:

(yes) (1) A muscle can only pull; it never pushes.

(no) (2) Whenever there is nervous stimulation the muscles relax. <sup>contraction or tension</sup>

(yes) (3) Every muscle has its two ends attached to different bones.

(yes) (4) All muscles are arranged in antagonistic pairs or groups.

(no) (5) The smaller muscles are located where the greatest force is needed.

(no) (6) The human machine has a high degree of efficiency.

(yes) (7) The primary factors in the physiological



condition are fatigue, source of food substance, and removal of waste substances from the tissue.

(yes) (8) The muscles of the body are of three types, smooth, cardiac, and skeletal.

(no) (9) The cardiac is the type directly responsible for motor activity.

(yes) (10) Muscle activity takes place through the regular processes of metabolism in muscle.

(yes) (11) Inertia is a property of all objects.

(no) (12) The human body is stable when in a standing position.

(yes) (13) Gravity is a constant force acting on all bodies.

(no) (14) The two articulating bones of the hip joint are the scapula and the humerus.

(no) (15) The elbow joint is a ball + socket joint.

(yes) (16) The gliding type of joint is best exemplified by the articular processes of the vertebrae.

(yes) (17) The ball and socket joint is perfectly described by its name.

(yes) (18) The saddle type of joint is a special arrangement found only in the thumb.

(no) (19) Adduction is a lateral movement away from the central plane of the body.

no (20) Abduction is a movement inward toward the central plane of the body.



V (a) What do we mean by equilibrium? Give your most complete definition. ~~of this state~~

(b) Since it is impossible to understand the physical principles of total body action without understanding certain governing laws of motion, please give in detail the Newtonian laws:

- (1) The laws of inertia (2) The laws of acceleration (3) The law of reaction.

(c) The levers of the body frequently move in complete unison and <sup>with</sup> perfect timing ~~in~~ respect to their involved neighbors. For instance, when one climbs the stairs, one's weight is lifted by extension at three articulations simultaneously. ~~Do name~~ <sup>the articulations</sup> state generally what takes place ~~in this activity~~ in such activity at these ~~the~~ articulations.



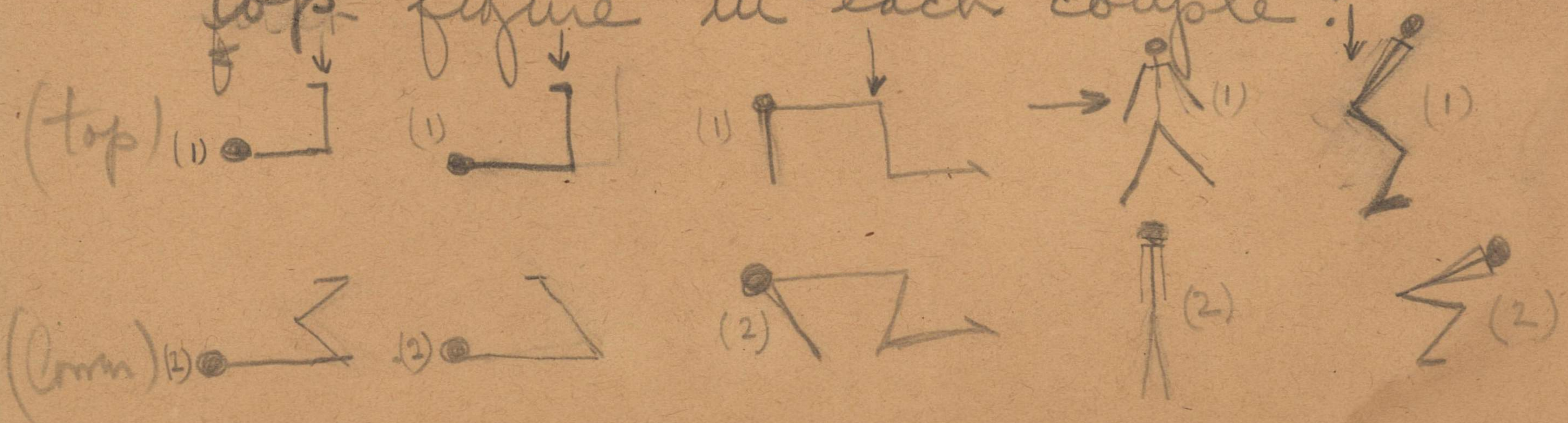
VI <sup>(a)</sup> List four ~~of~~ <sup>(b)</sup> the fundamental manipulative skills. ~~and~~ Explain ~~both~~ <sup>briefly</sup> the three principal types to which all manipulative skills belong?

VII In the field of selected sports describe state <sup>briefly</sup> the types of fundamental manipulative skills to which each of these sports belong, and give at least three general musts, either muscular or mechanical, for the successful performer of each sport. (If you prefer, substitute other sports with which you may be more familiar.)

- (a) Archery
- (b) Badminton
- ~~Baseball~~
- ~~Basketball~~
- (c) Judo/Way

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VIII Each figure below represents the base for some couple balancing stunt. The arrow represents the weight line of the top performer. Why is the weight supported more easily by the top figure in each couple?





VIII

Since the spine is the keystone for the development of an upright posture, name four of its specific functions in this service to the human body.

~~(b) Are these values, for the most part, based on observation and rationalization rather than on scientific evidence?~~

IX

There are some 14 or 15 commonly recommended exercises for posture training. Name at least five such exercises and discuss briefly why each is effective.

X

List at least 5 home or occupational activities.

Study: Chaps: I, II, III (first 3 pages), IV, VII, VIII, XIII, XIV, XV, XVIII, XIX.

N.B. Mrs Hulteen I think I failed to include Chap XVIII to you. Please tell Mrs Coore to include XVIII. It is short.