Skull Comparison and Analysis Lab

Part 2: Race

Step 2: Race

❑Observe the skull and each skull feature listed

❑ Fill in Table 2 for Race in your lab packet

❑Look at the following images to compare the 3 major racial categories

Race

Forensic Anthropologists recognize main three racial groups

1. European (European, Middle Eastern and East Indian descent)

2. African (African, Aborigine, and Melanesian descent)

3. Asian (Asian, Southeast Asian, Native American (north, central, south), and Polynesian descent)

Orbit Shape

broad
nasal
aperture,
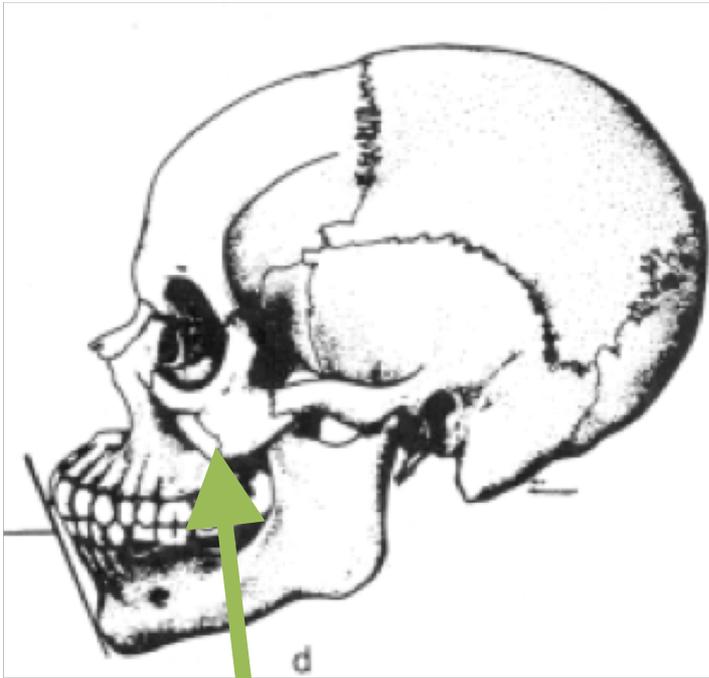rounded
nasal sill
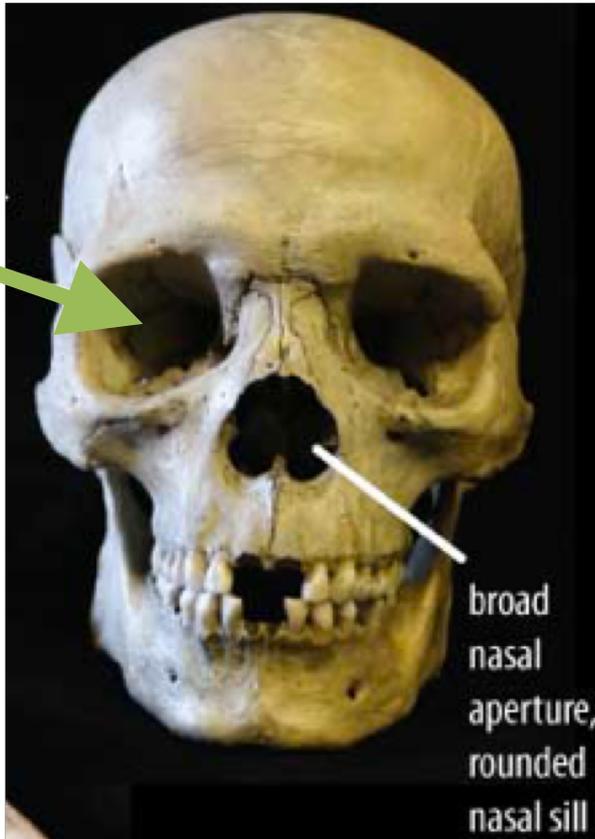
**African –
Rectangular
Orbits**

**Asian –
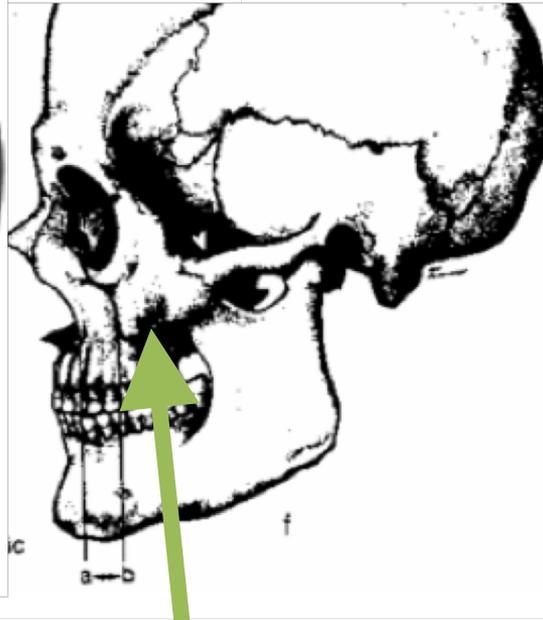Circular or
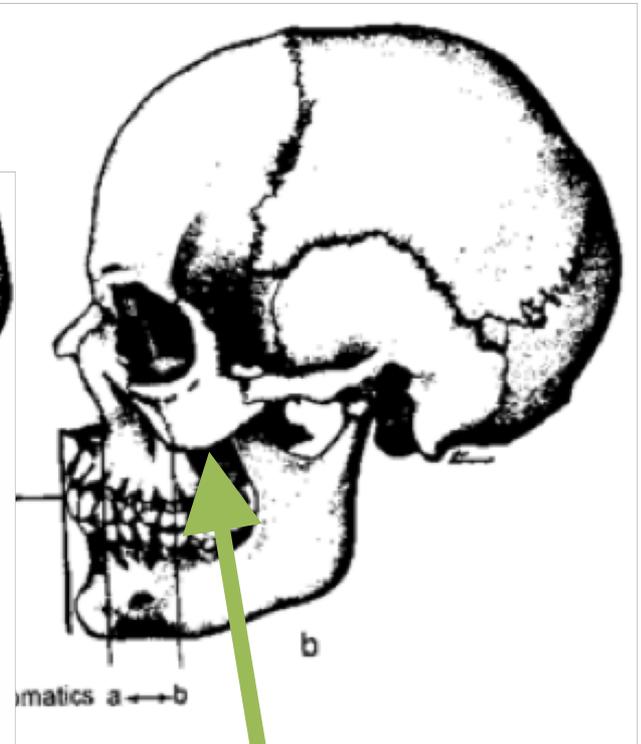Round Orbits**

**European – Oval
Orbits**

Zygomatic Protrusion
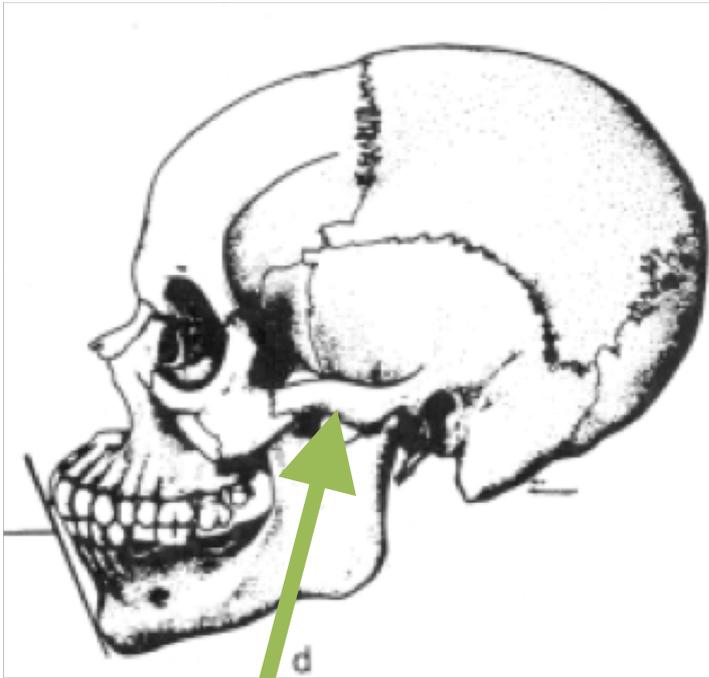

**African –
Smaller and
more
depressed**

**Asian –
Extends
forward**
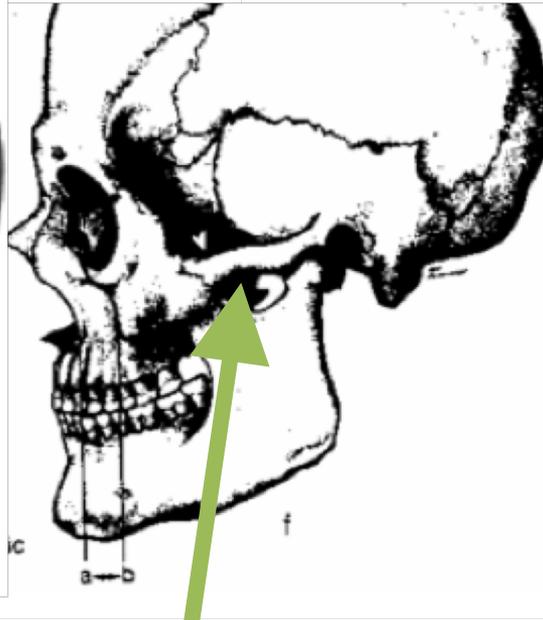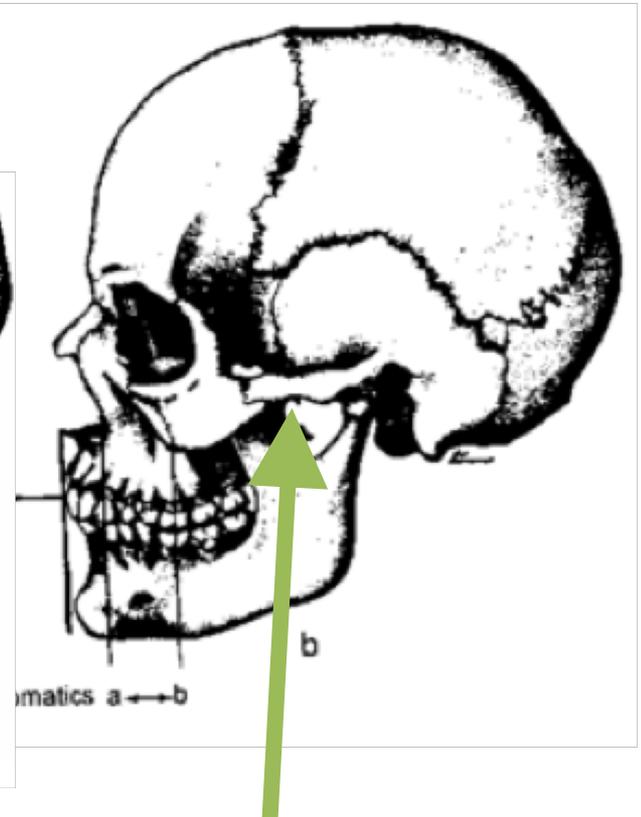
**European –
Larger and more
depressed**

Zygomatic Arch

African – Shorter and wider

Asian – Wide and prominent

European – Narrow
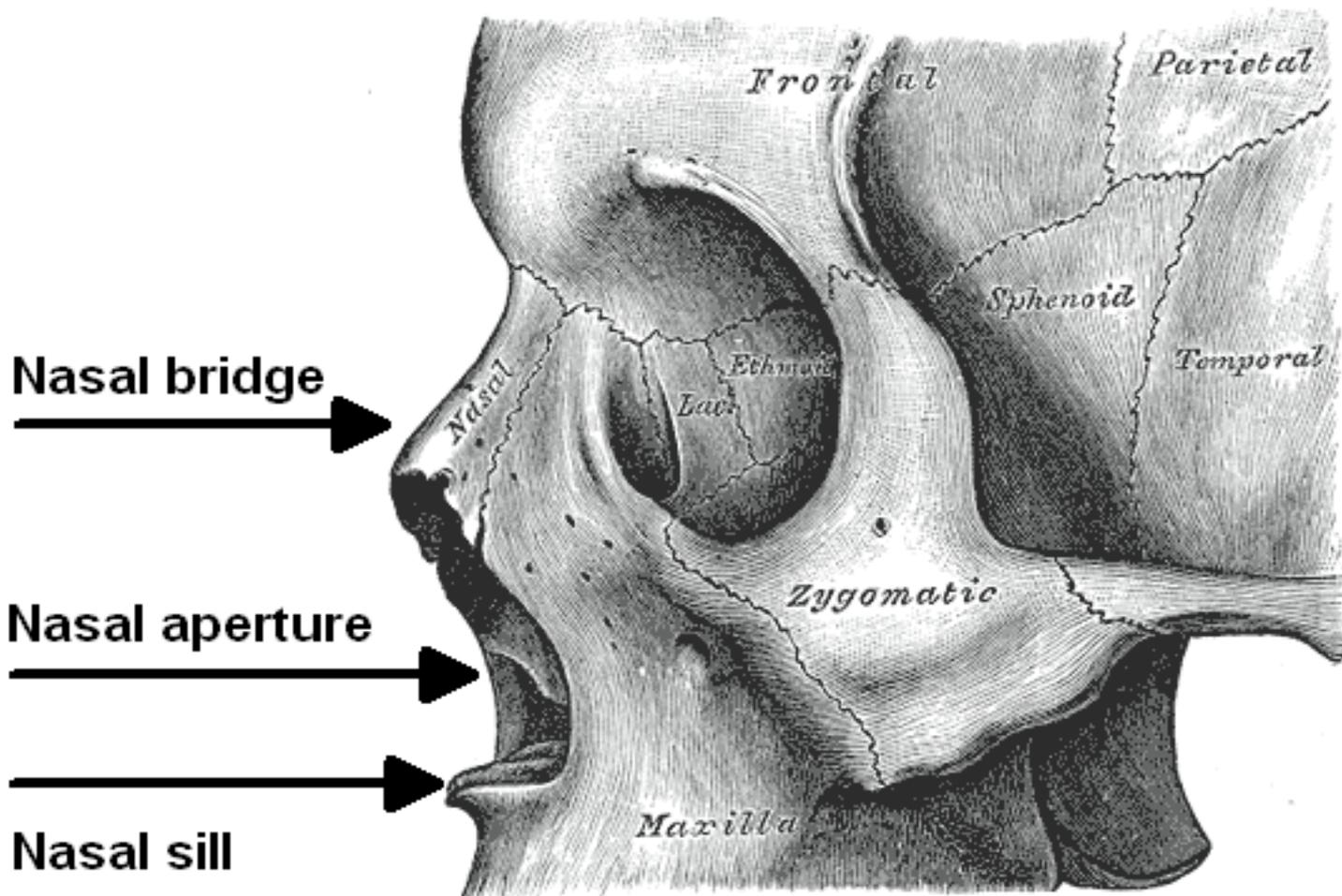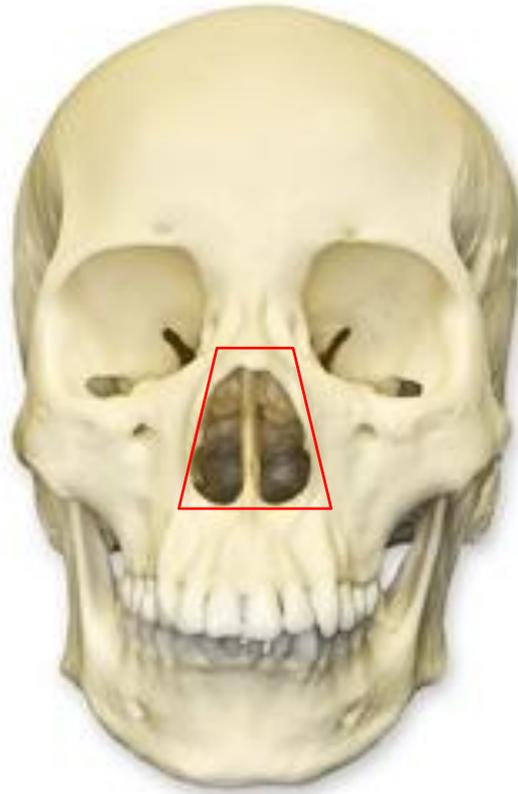
Nasal bridge

Nasal aperture

Nasal sill

Frontal

Parietal

Sphenoid

Temporal

Nasal

Ethmoid

Lac.

Zygomatic

Maxilla

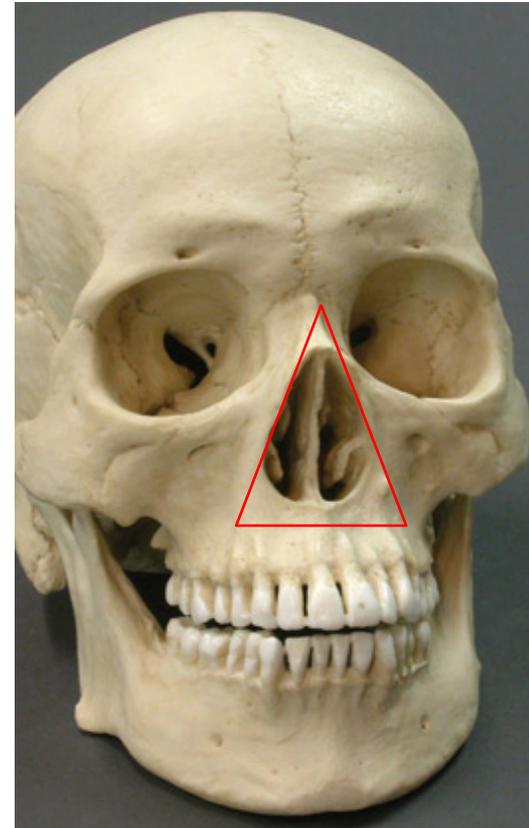# Nasal Bridge and Aperture

African

Asian

European

Bridge: "semicircle shape" wide no arch
Aperture: Wide and short

Bridge: "tower shape" narrow, parallel, slightly arched
Aperture: Flared at base

Bridge: "tent shape" narrow and arched
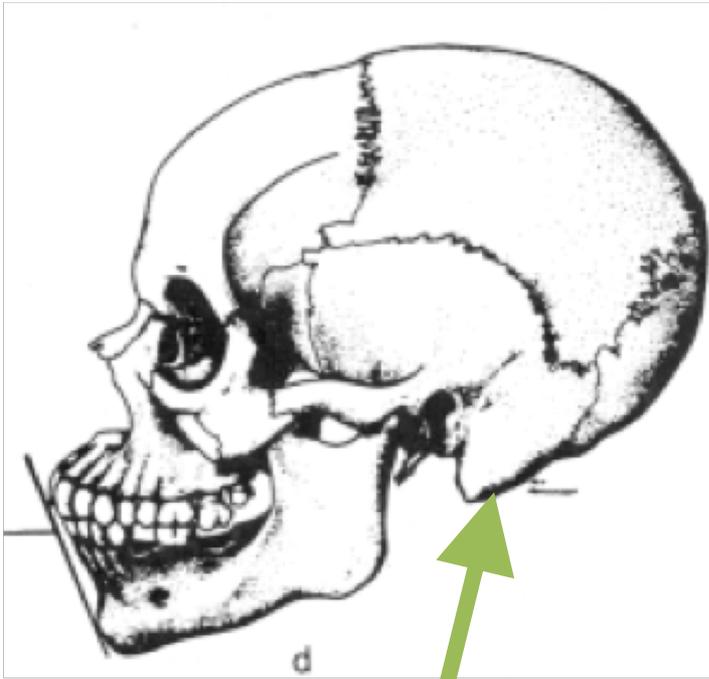**Aperture:** Narrow and high

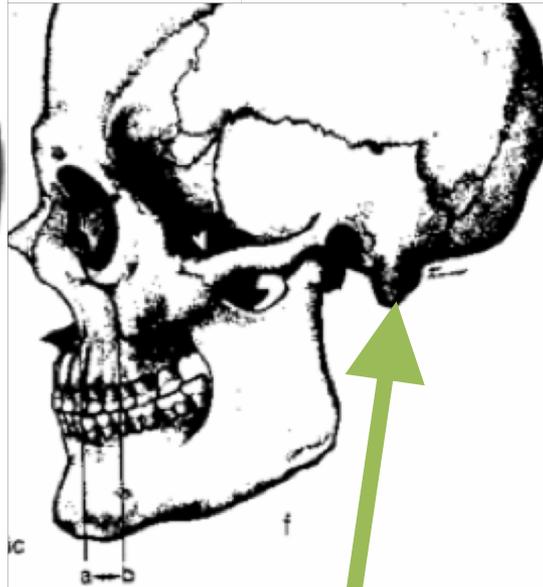# Nasal Sill

African – Intermediate Angle
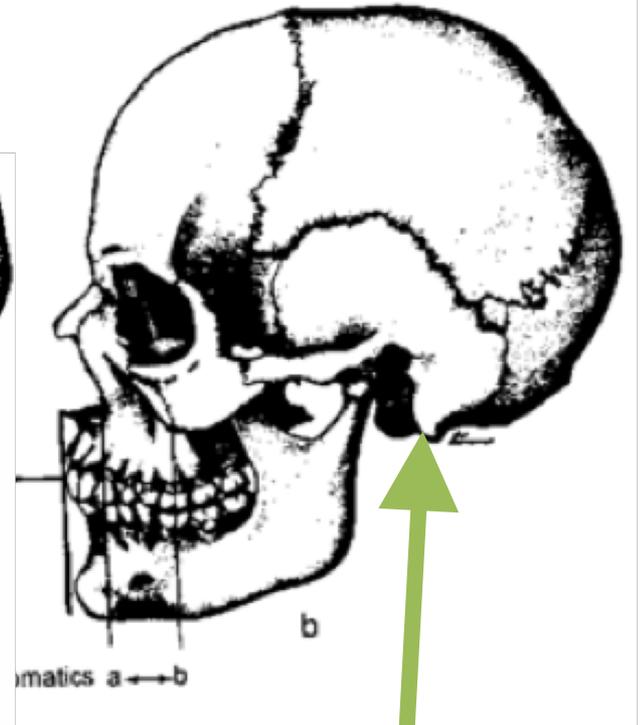
Asian – Little to no angle

European – Sharp Angle

Mastoid Process

African – Wider

Asian – Shorter Projection

European – Narrow and pointy

Prognathism (forward extension of the maxillary bone)

African – pronounced

Asian – Moderate

European – Little or absent

Skull Index Ratios

1. Nasal index =

   Nasal width/ nasal height X 100

   (Use caliper for both)

2. Facial index =

   Height of face/ width of face X 100

   (Caliper for height and slider for width)

3. Cranial index =

   Width of cranium/ length of cranium X 100
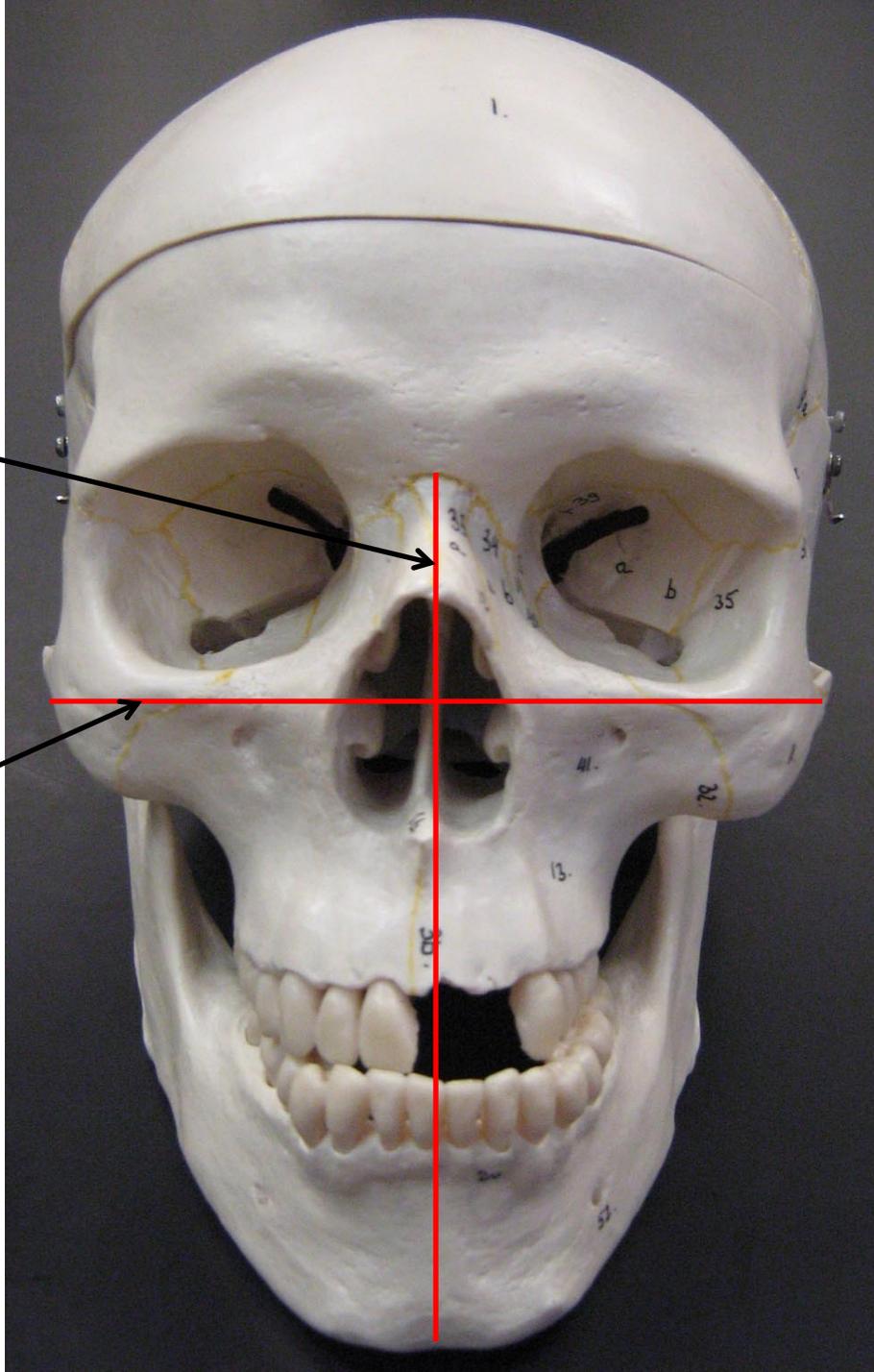
   (Use osteometric slider for both)

Nasal Index Measurements

Nasal width (widest part of nasal opening)

Nasal height (from top of nasal bone to bottom of nasal opening)

Facial Index Measurements

Face height (from top of nasal bone to bottom of chin)
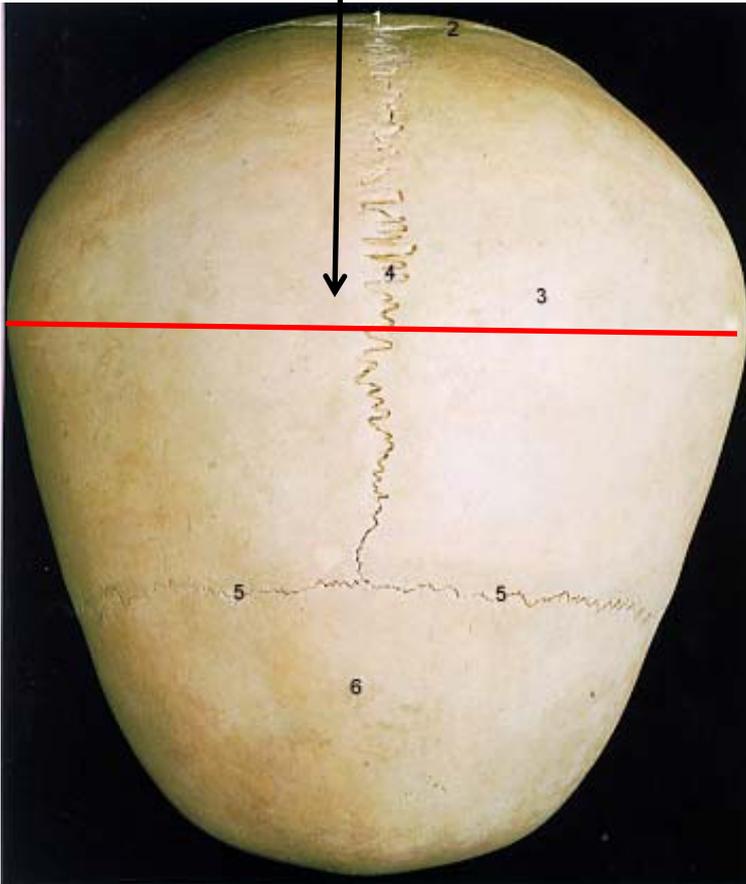
Face width (from zygomatic bone to zygomatic bone)
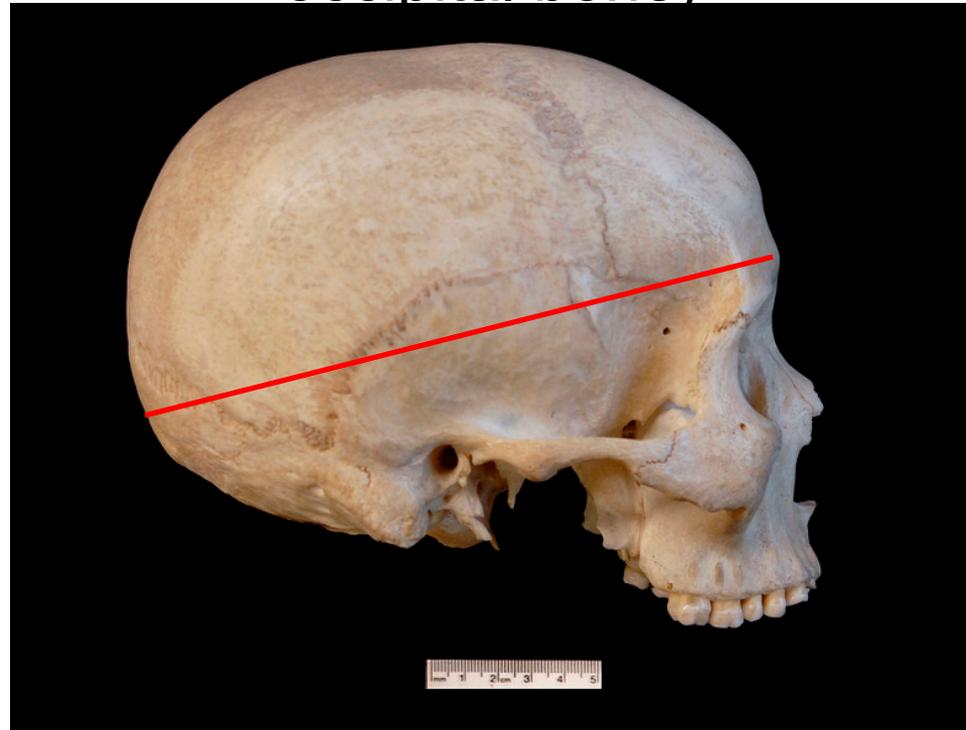
Cranial Index Measurements

Cranium width
(widest part of cranium)

Cranium length
(from the very front of the frontal bone to the very back of the occipital bone)

Characteristic	Asian	African	European
Nasal Index	Between 48-53	Greater than 53	Less than 48
Facial Index	Between 85-90	Less than 85	Greater than 90
Cranial Index	Greater than 80	Less than 75	Between 75-80