An investigation into the structure and interactions between anime girl thigh pillows and the human skull.

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Link to official google drive document : https://docs.google.com/document/d/14KZYde56MkeKtkNfwRes9rt02CUorBgP/edit?usp=sharing&ouid=108724062980210141143&rtpof=true&sd=true

Q1) What is the perfect leg length?

Q2) What is the perfect ratio distance for subischial length start too thigh too cruciate ligament?

q3) What is the perfect bone to muscle to fat ratio for the absolute territory? Or max min limit

Q4) What is the absolute territory?

Q5) What is the best thigh gap ratio relative to the scale of the person?

Q6) What is the max min limit for height where a person can have the golden standard.

Q7) How much knee buckle is ideal? Max min

Q8) Given the prior information, what then becomes the overall composition of the golden ratio for thighs without plastic surgery? Can the person meeting those thigh standards only be petite? Overweight? Underweight? Is your taste in women healthy for the person at hand? We as a society and a community have a moral obligation to keep our waifus healthy and thus should not reinforce unhealthy or dangerous thigh types, or general body types.

Q9) What is the ideal curvature of said person's crotch for thigh gap max power?

Q10) What is the depth of the curvature of the person's shins?

Q11) What is the curvature of this person's calves and hamstrings?

Q12) What is the ideal pressure resistance (against grip strength) for hamstrings, thighs, calf's and other leg muscle groups?

Q13) What is the ideal ratio for foot size to the before mentioned leg length and thicknesses?

Q13) what is the golden ratio, and what is the formula to be used to differentiate between the best thighs and the not best thighs IE a formula that can be used with image

stills to figure out if the ideal body mass index using assumed height and perceived body weight by correlating average measurements in body parts to weight ranges is humanly possible and accounting for perceivable muscle mass so that you can have a gross approximation of a person's relativity to that golden ratio.

Q14) What is "Ideal"? Ideal in this research are calculations resulting in near golden ratio results. This research is about math and the innocent healing of a soul gifted through the blessing of lap pillows and not about sexualizing our waifus.

Q15) Is it possible to remain as close to the golden ratio while having a healthy human-like body? How unrealistic are our waifu's and should we question the standards we enforce by idolizing their varied ratios? That is a question, I guess. Honestly the golden ratio has no correlation to your waifus worth and your waifu is a queen no matter what the numbers may say. She may just be a queen that does not have a comfortable lap to use as a pillow though.

APPLICATION STATEMENT AND DIRECTION.

We will take inputs, and equate them to your waifu, or, inversely, give you the measurements of a selected waifu by correlating them to IRL standards that are tangible.

WE WILL START WITH **** AS SAMPLE -A- FOR GOLDEN RATIO. (so far the closest to the best thighs I have ever seen.)

you can gain comparator information by utilizing the following.

getting your waifu's measurements through image stills.(this can be used to calculate accurate details when making a personal cosplay ~UwU~, useful for precisely detailing armor etc)

If you have a frontal and side profile full body image and know the height of your waifu:

1) Take note of the height and open images in editor, place grid behind

2) Calculate grid scale to person. So if they are 5'4 convert to cm 152.4 and use cm by cm grid lines

3) The image size won't be directly the correct size, you can A scale it to the correct size, or B dived for a multiplier to work with, I prefer using a multiplier as it makes counting grid squares easier but if you have a built in measuring tool it's easier to scale up.

4) You use the total height value of the person to calculate everything as it's a measurement reference.

5) Measure out all parts of the body note them as -flat- measurements and mark distances at where they are measures, so like, 1 foot from ground, 2 feet from ground, 3 feet from ground, for arms

6) Do this incase you only have side pictures of specific parts of their body, like the lower half of someone's legs in one picture, and a stomach side profile in another, so you know half the dimensions(wide) of each part of their body, so you can calculate the other half(deep).

7) After you get both wide and deep you have to remember that the human body is not a perfect oval, changes in surface area occur so you have to calculate the curvature of the sides and stomach bevel and spinal bevel, giving yourself a margin of error. You have to grid out an eclipse, and then find the circumference of that eclipse.

Formula for the circumference of an eclipse where: A= width, B=depth

Find both minor radius measurements : [a*(1/2)]=a1, [b*(1/2)]=b1

Take a1, b1, -a1, -b1 and using a grid draw them out as lines moving away from (0,0)

https://www.google.com/search?client=opera&q=circumference+of+an+ellipse&sourceid=opera&ie=UTF-8&oe=UTF-8

google provides an ellipse circumference calculator for free, feel free to use it, but know it will NOT be an accurate depiction. I would use this as reference and impose it on a grid, and draw out assumed bevels on the eclipse. If you take the above eclipse without changing it to form more to the human body you will have smaller figures than you actually need.

8) After you get certain measurements you can use a ratio calculator to get the rest of that region.

Torso =region 1

Thighs= region 2

Calves= region 3

Biceps = region 4

Forearms = region 5

9) measure out the drawn assumed outline along the outline.

As no one has been willing to aid in this higher cause I have not been able to get a proper mathematician to review my work. If you are a cultured soul, please do feel free to aid in this great effort. All the degree holding mathematicians I have asked seemed to decline the request for reviewing my calculations.

Please send your fan mail and love to : institute.of.tmi@gmail.com

And we will compare our anime waifu's to her ratios and contrast their likeness.

We will use Asuka langley for this showcase.

A for body to leg total

A=5' +1"

Upper body= ub = 2.49

Leg/lower= lu =2.61 where lu is at start of subischial length

lb+ub=A

2.61+2.49=5.1 We are good!

For inches Ub = 2.4875*12 = 29.85"

For inches Lb = 2.6125*12 = 31.38"

Her upper body to lower body ratio is 2.98 : 3.13

Ankle to knee: 1.21875for inches*12= 14.625"

Knee too high end start inseam: 1.0625*12= 12.71"

Ankle to heel= .375*12= 4.5"

These calculations are .00~ accurate

Her ankle measure to thigh measure ratio is 1.46 : 1.27

Subtract ankle

.375=ak for ankle

So

A-ub-ak=inseam

5.1-2.49-.375= 2.235*12 = 27.335”

Assume wrong, assume 26-28 but closer to 27”

A+b/a= 27.335/14.625=1.8690598 not 1.618 so…. Not golden ratio.

The golden ratio states that the golden ratio for a measure of 27.335 is 10.441 : 16.89396

So we deviate slightly from the golden ratioTM

But to be honest I think that ratio is rather absurd anyway, I prefer Asuka langley's ratio.

Surface area calculation

1.40m² through **1.47m²** using dubois and dubois formula

For the following we will plug in values.

5’1 on average for a healthy woman is 100-131 (BMI 18.5-24.9)

BMI= **19.84 kg/m²**

@105lbs 5’1”

Body fat percentage (BFP) formula for females:

USC Units:

$$BFP = 163.205 \times \log_{10}(waist+hip-neck) - 97.684 \times (\log_{10}(height)) + 36.76$$

SI, Metric Units:

$$BFP = \frac{495}{1.29579 - 0.35004 \times \log_{10}(waist+hip-neck) + 0.22100 \times \log_{10}(height)} - 450$$

Note that results of these calculations are only an estimate since they are based on many different assumptions to make them as applicable to as many people as possible. For more accurate measurements of body fat, the use of instruments such as bioelectric impedance analysis or hydrostatic density testing is necessary.

Fat mass (FM) formula:

FM = BF × Weight

Lean Mass (LM) formula:

LM = Weight – FM

A leg is about 16% of our total body mass on average. With below knee being 6% and above being 10%

Formula for isolating fat to lean mass to bone in thigh region.

First subtract out the weight of the skeleton

Than take the surface area (about 16% for the whole leg) and equate it to BMI as a ratio with lean mass to fat mass

Factor in diversity of mass type as it gets further from the reference angle.

Calculate the surface area of her thighs

Apply ratio to that region.

We will call this the TMI for thigh mass index

Create streamline formula for calculating this

Now we need to calculate the surface tension to know how much pressure resistance is created by the different fat:lean:surface ratios.

T (dynes/cm.) = Pressure (dynes/cm.2) x area (cm.2) 4vrx (cm.) where x (cm.) =rise in level of the center of the skin (Jones & Hyslop, 1935).

So, the higher the mass density per area goes as the surface area stays constant in that area the higher the firmness. I think the best firmness does sit around 18-20% fat percent with a petite frame that gives you limited squish distance but optimal squish worth as squish depreciates after a certain point, there should be squish, , no squish is not good, but too much squish and you lose sight of what is really important and that's curvature . Thigh gap goes away making for a more bulbous lap pillow inflated in the center, this is certainly less comfortable than having an indent for our human skulls... guys these days getting lost in the thicc…. It is important to always keep in mind the comforting feelings of being surrounded by the ideally firm and squishy thighs, a reality I may add that is not possible if there is no gap for your head to fall into.

I think asuka's sits on the threshold of 18%

This is the objective. 1

Objective two

Output squish value and TMI and other factors.

Discern if the values can ever be achieved by a real person without impairing health.

Map out averages for values that waifus have correlate them to IRL

If no value attribute max min value for their given information.

Make a program that outputs the desired ratios of their waifus

And a realistic and attainable ratio template to go after.

I guess this could also be used by cosplayers or something, but that's not the point here at all.

LIST OF WAIFU's CALCULATED ON DOCUMENT B :

Jibril, shuten, saber, kawakami (P5), Mordred, lucy (lied), asuka, mari, dva, mercy, 002, Kurumi (Date A Live), Yui from Angel Beats, Mi mi mi, rin tosaka, Hiyori iki, yoko litner, himiko toga

---------BONES

The human skeleton represents approximately 14% of the average human male's weight and 10% of the average human female's weight.

This is important to be aware of when addressing the composition of portions of the body if we wish to properly discern the best ratio of muscle to fat as if there is too little squish you will lay your human like head on a hard bone like lap but too much squish can lead to your own death.

----------SKIN

In physiology and medicine, the **body surface area (BSA)** is the measured or calculated surface area of a human body. For many clinical purposes BSA is a better indicator of metabolic mass than body weight because it is less affected by abnormal adipose mass.

Nevertheless, there have been several important critiques of the use of BSA in determining the dosage of medications with a narrow therapeutic index, such as chemotherapy.

Various calculations have been published to arrive at the BSA without direct measurement. In the following formulae, BSA is in m^2, W is mass in kg, and H is height in cm.

The most widely used is the Du Bois, Du Bois formula,[4] HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area" HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area" HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area" HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area" HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area" HYPERLINK "https://en.wikipedia.org/wiki/Body_surface_area"[5] which has been shown to be equally as effective in estimating body fat in obese and non-obese patients, something the Body mass index fails to do.[6]

Average BSA for children of various ages, for men, and for women, can be estimated using statistical survey data and a BSA formula:[16]

Mean male BSA by age				
Age or age group	**metric**		**imperial**	
Neonate (newborn)	0.243	**m^2**	2.612	**ft_2**
2 years	0.563	**m^2**	6.060	**ft_2**
5 years	0.787	**m^2**	8.471	**ft_2**
10 years	1.236	**m^2**	13.304	**ft_2**
13 years	1.603	**m^2**	17.255	**ft_2**
18 years	1.980	**m^2**	21.313	**ft_2**
20–79 years	2.060	**m^2**	22.173	**ft_2**

80+ years	1.920	m^2	20.667	ft^2

Mean female BSA by age				
Age or age group	**metric**		**imperial**	
Neonate (newborn)	0.234	m^2	2.519	ft^2
2 years	0.540	m^2	5.813	ft^2
5 years	0.771	m^2	8.299	ft^2
10 years	1.245	m^2	13.401	ft^2
13 years	1.550	m^2	16.684	ft^2
18 years	1.726	m^2	18.579	ft^2
20–79 years	1.830	m^2	19.697	ft^2
80+ years	1.638	m^2	17.631	ft^2

The estimations in the above tables are based weight and height data from the U.S. NCHS National Health and Nutrition Examination Survey (2011-2014).[17]

----------BODY FAT

Measuring Body Fat Percentage

U.S. Navy Method:

There are many specific techniques used for measuring body fat. The calculator above uses a method involving equations developed at the Naval Health Research Center by Hodgdon and Beckett in 1984. The method for measuring the relevant body parts as well as the specific equations used are provided below:

- Measure the circumference of the subject's waist at a horizontal level around the navel for men, and at the level with the smallest width for women. Ensure that the subject does not pull their stomach inwards to obtain accurate measurements.
- Measure the circumference of the subject's neck starting below the larynx, with the tape sloping downward to the front. The subject should avoid flaring their neck outwards.
- **For women only:** Measure the circumference of the subject's hips at the largest horizontal measure.

Once these measurements are obtained, use the following formulas to calculate an estimate of body fat. Two equations are provided, one using the U.S. customary system (USC) which uses inches, and the other using the International System of Units, specifically the unit of centimeters:

Body fat percentage (BFP) formula for males:

USC Units:

$$BFP = 86.010 \times \log_{10}(\text{abdomen-neck}) - 70.041 \times \log_{10}(\text{height}) + 36.76$$

SI, Metric Units:

$$BFP = \frac{495}{1.0324 - 0.19077 \times \log_{10}(\text{waist-neck}) + 0.15456 \times \log_{10}(\text{height})} - 450$$

Body fat percentage (BFP) formula for females:

USC Units:

$$BFP = 163.205 \times \log_{10}(waist+hip-neck) - 97.684 \times (\log_{10}(height)) + 36.76$$

SI, Metric Units:

$$BFP = \frac{495}{1.29579 - 0.35004 \times \log_{10}(waist+hip-neck) + 0.22100 \times \log_{10}(height)} - 450$$

Note that results of these calculations are only an estimate since they are based on many different assumptions to make them as applicable to as many people as possible. For more accurate measurements of body fat, the use of instruments such as bioelectric impedance analysis or hydrostatic density testing is necessary.

Fat mass (FM) formula:

FM = BF × Weight

Lean Mass (LM) formula:

LM = Weight - FM

BMI Method:

Another method for calculating an estimate of body fat percentage uses BMI. Refer to the BMI Calculator to obtain an estimate of BMI for use with the BMI method, as well as further detail on how BMI is calculated, its implications, and its limitations. Briefly, the estimation of BMI involves the use of formulas that require the measurement of a person's height and weight. Given BMI, the following formulas can be used to estimate a person's body fat percentage.

Body fat percentage (BFP) formula for adult males:

BFP = 1.20 × BMI + 0.23 × Age - 16.2

Body fat percentage (BFP) formula for adult females:

BFP = 1.20 × BMI + 0.23 × Age - 5.4

Body fat percentage (BFP) formula for boys:

BFP = 1.51 × BMI - 0.70 × Age - 2.2

Body fat percentage (BFP) formula for girls:

BFP = 1.51 × BMI - 0.70 × Age + 1.4

sources for formulas and information of this paper :

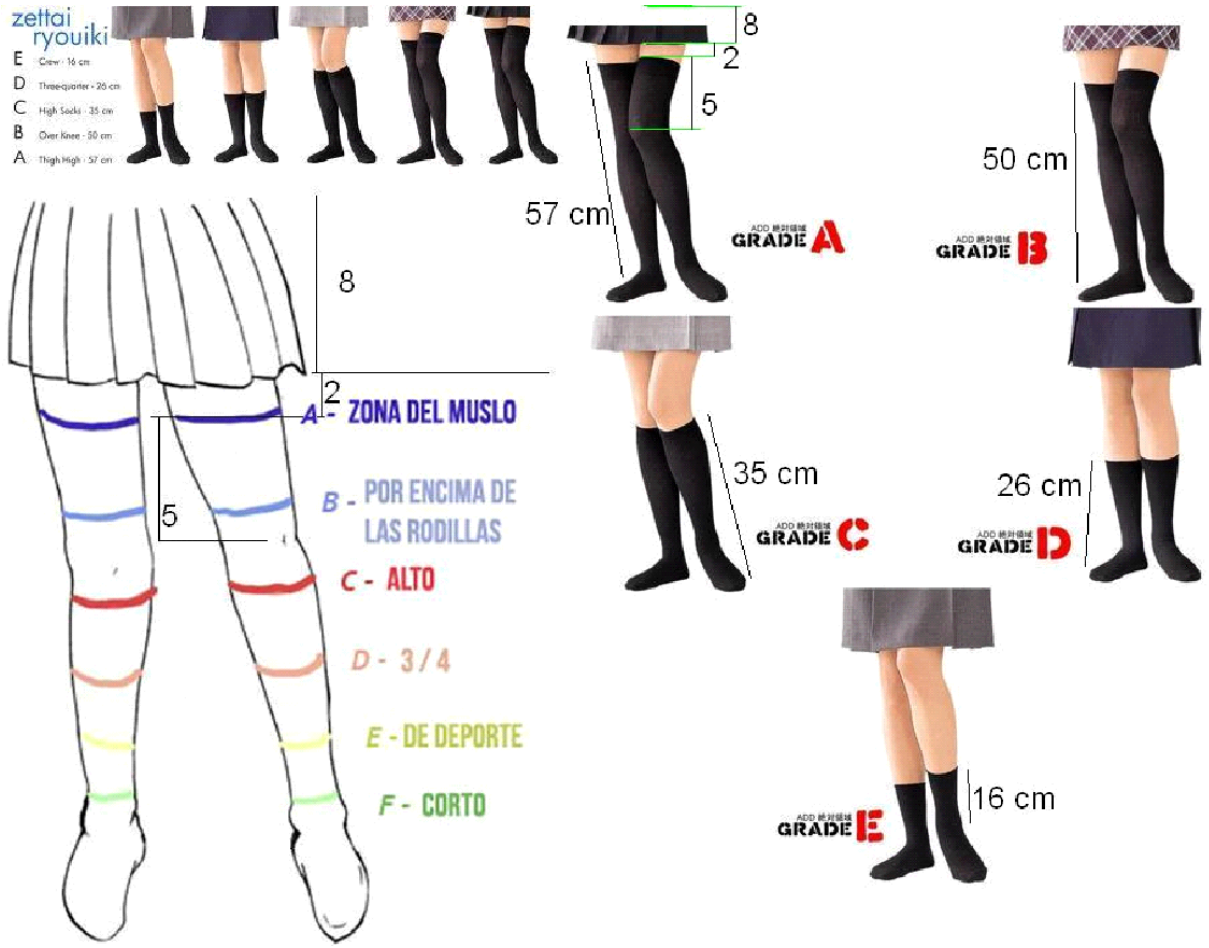
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2872302/

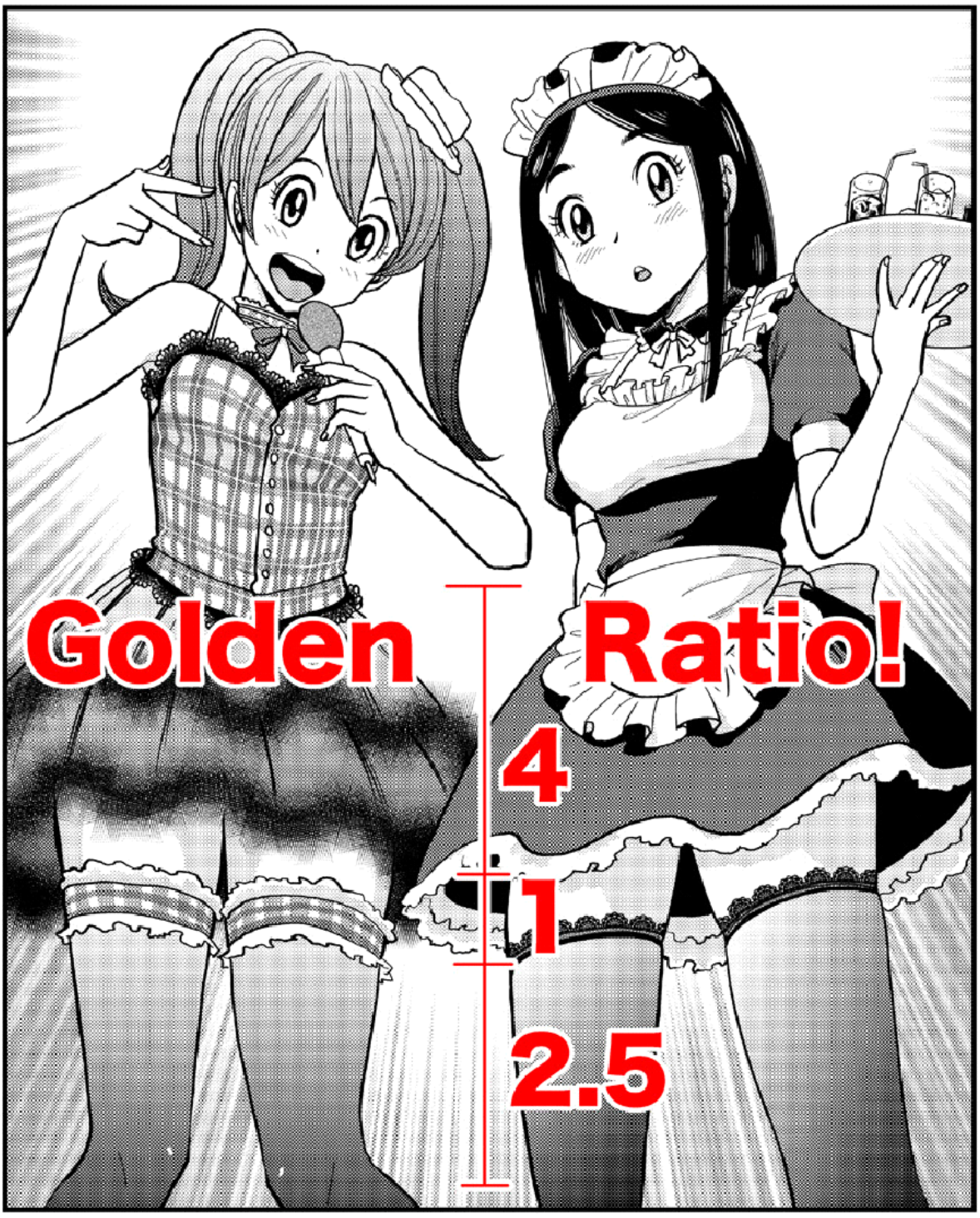
https://www.eviq.org.au/calculators/BSA

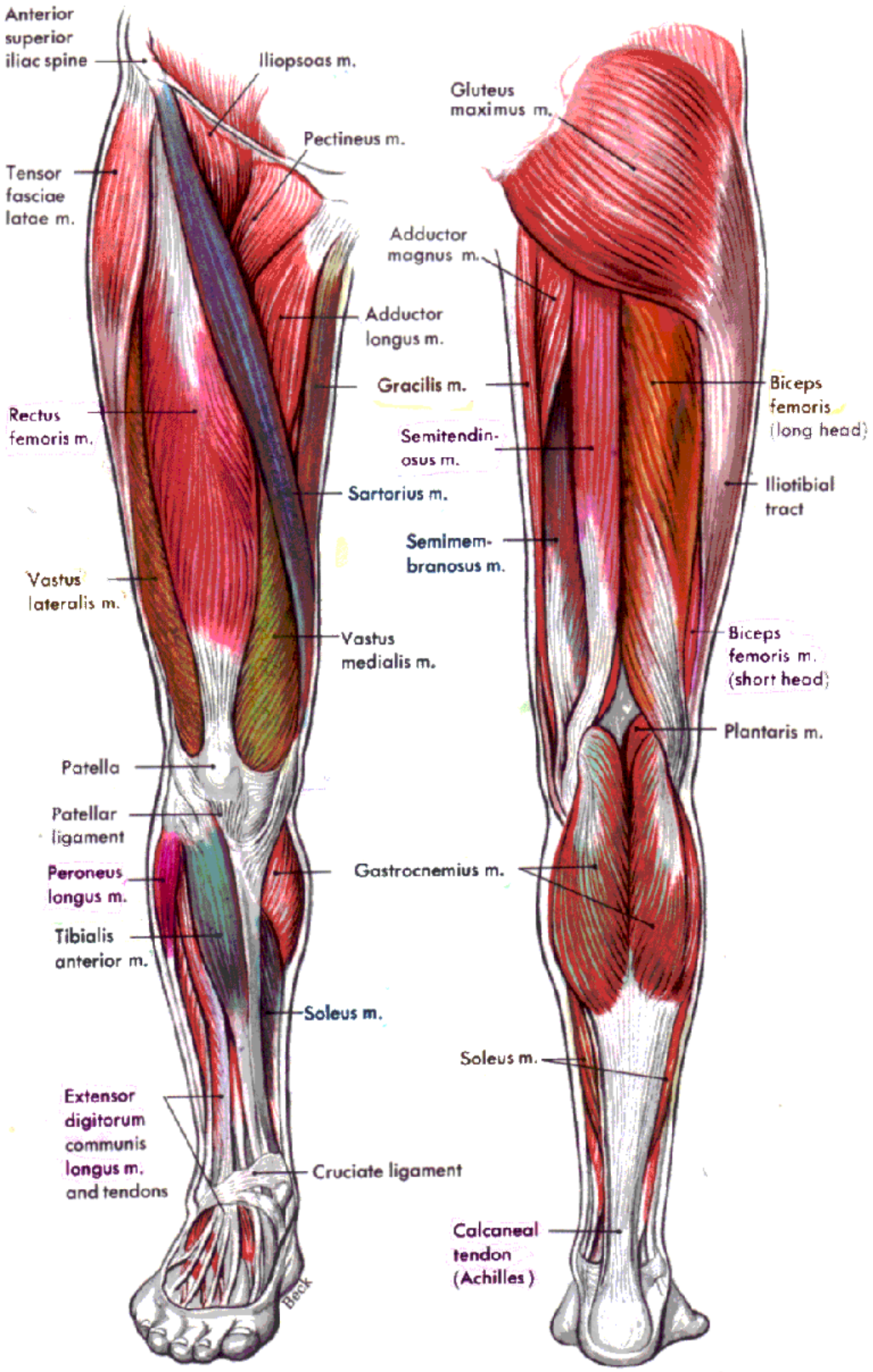
http://touchcalc.com/calculators/bmi_amputation

https://physoc.onlinelibrary.wiley.com/doi/pdf/10.1113/jphysiol.1951.sp004512

https://www.calculator.net/body-fat-calculator.html?ctype=standard&csex=f&cage=25&cweightlbs=110&cheightfeet=5&cheightinch=1&cneckfeet=0&cneckinch=11&cwaistfeet=0&cwaistinch=27&chipfeet=0&chipinch=30&cweightkgs=70&cheightmeter=178&cneckmeter=50&cwaistmeter=96&chipmeter=92&x=89&y=13




Golden Ratio!
4
1
2.5



Superficial muscles of the right thigh and leg, anterior view.

Superficial muscles of the right thigh and leg, posterior view.