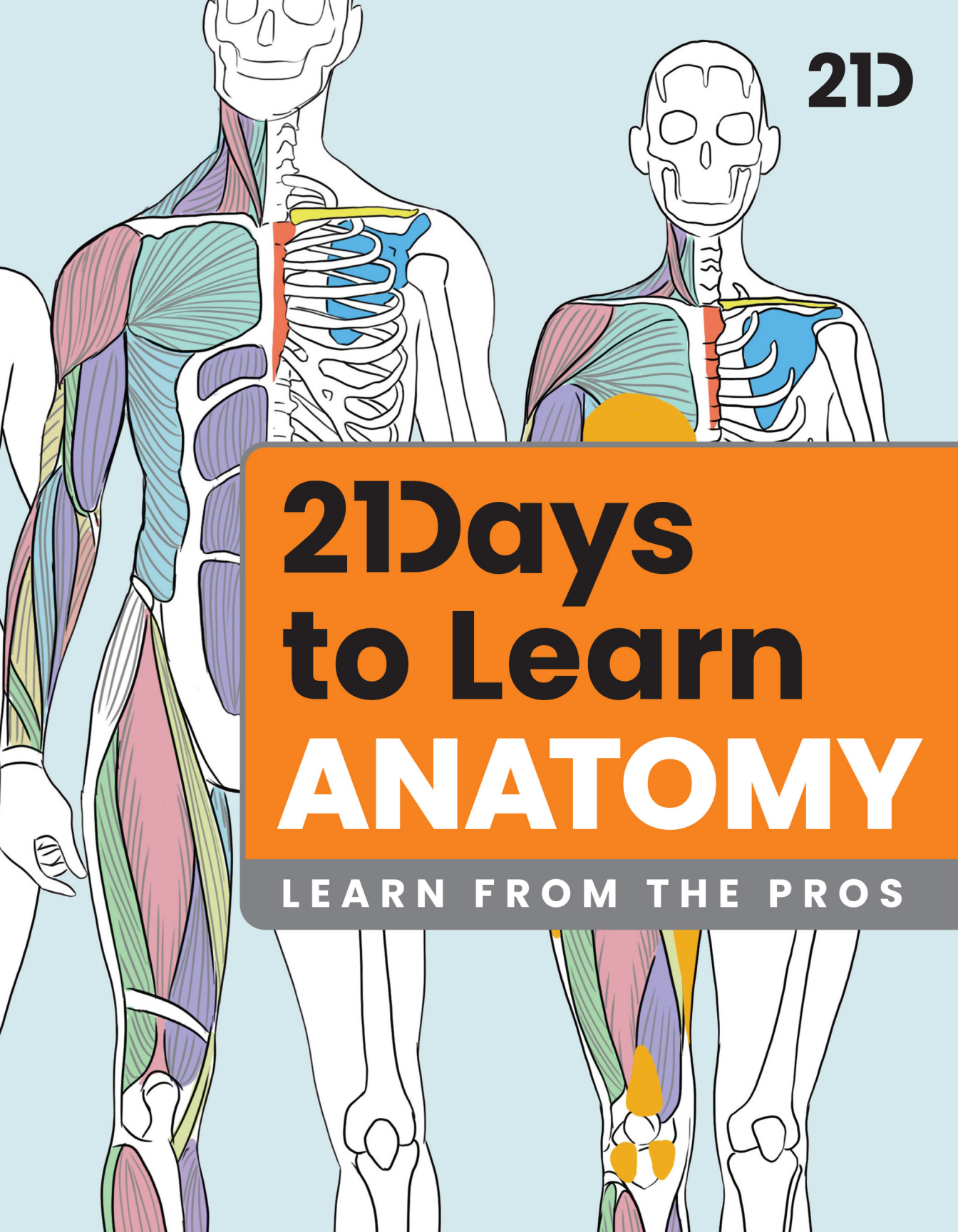
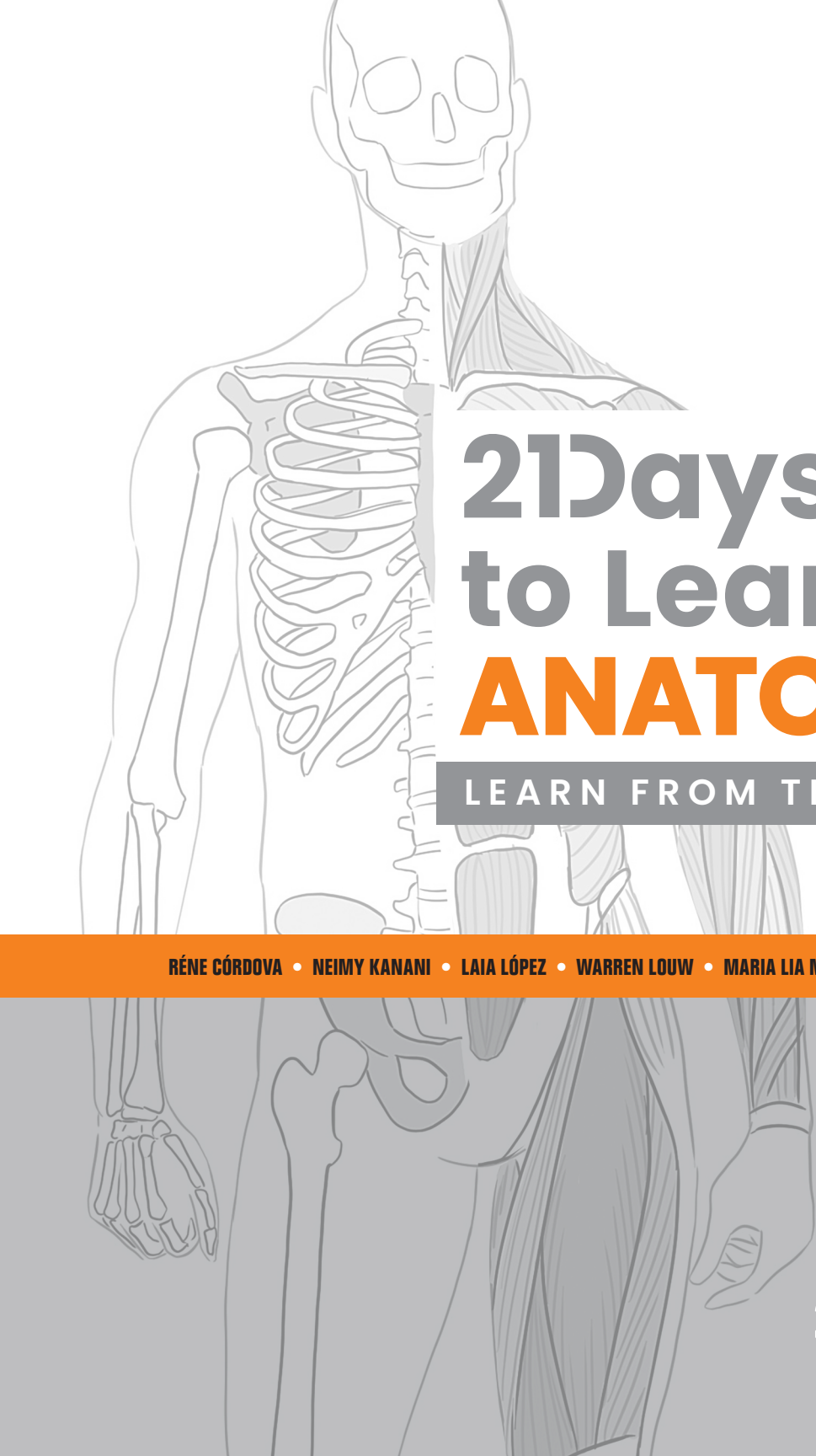


21Days to Learn ANATOMY

LEARN FROM THE PROS



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LEARN FROM THE PROS

RÉNE CÓRDOVA • NEIMY KANANI • LAIA LÓPEZ • WARREN LOUW • MARIA LIA MALANDRINO • RODGON

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For beginners, students, and masters

THANK YOU

TO THE ARTISTS:

Réne Córdova
Neimy Kanani
Laia López
Warren Louw
Maria Lia Malandrino
Rodgon

Thank you all so much for contributing to this book!
It would not have happened without your support and your help in spreading the word. It was a pleasure to work with you all.

21Draw

INTRODUCTION

Thank you for purchasing *21 Days to Learn Anatomy*. This adds another book to our growing library, and we hope that you will love it! As with our other books, the content in this volume was created alongside a set of video courses. You will have the option to check out the videos too.

This book provides insight into the techniques of some of the world's best artists and educators working in the field today. They share unique methods for understanding and mastering human anatomy and figure drawing, so you can apply this knowledge to achieve your learning goals, whether you are starting out or a seasoned professional.

We have worked diligently to condense the experts' long years of training and professional experiences into this new volume. In *21 Days to Learn Anatomy*, you will learn from top industry artists from companies like Disney, Marvel, DreamWorks, and more. You'll also learn how they approach concepts from the basics of body shapes and forms, to more advanced concepts like weight, rhythm, figure drawing, and much more!

21Days to Learn Anatomy

HOW TO USE THIS BOOK

This book is different from our previous editions, as it is specifically designed for you to follow along each day for 21 days. By the end of this journey, your drawing skills will be much improved. To get the most out of this book, we recommend setting aside time to focus on these lessons daily. Each day builds on knowledge learned in the previous lesson, so it's important to start at Day 1 then progress through each lesson sequentially.

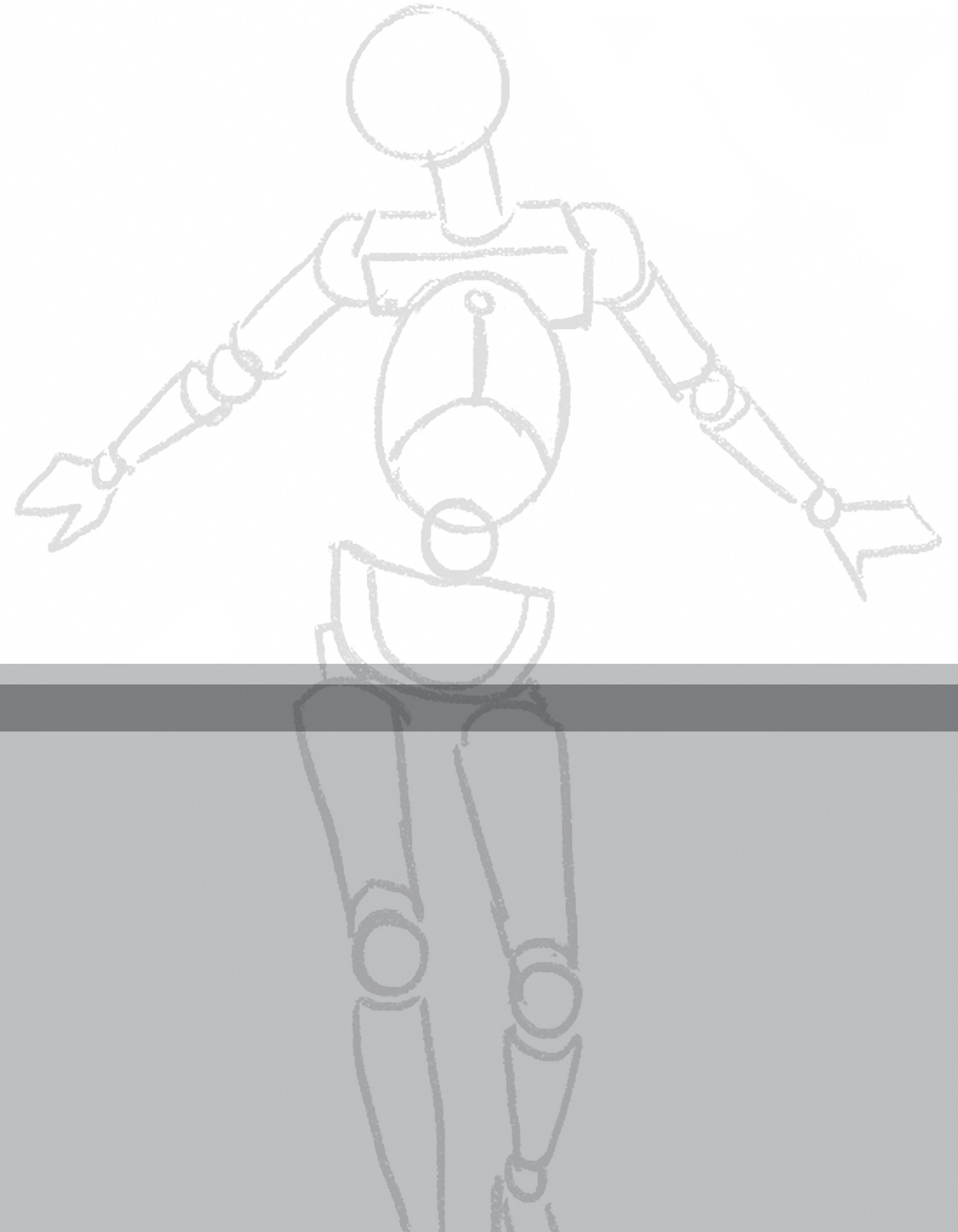
You can enhance your learning experience by watching our video courses by each artist listed in *Day 21: Practice and Resources*. These videos provide additional insights and demonstrations from our expert artists, helping you grasp the concepts more effectively. Please note that you will need a subscription to access the videos.

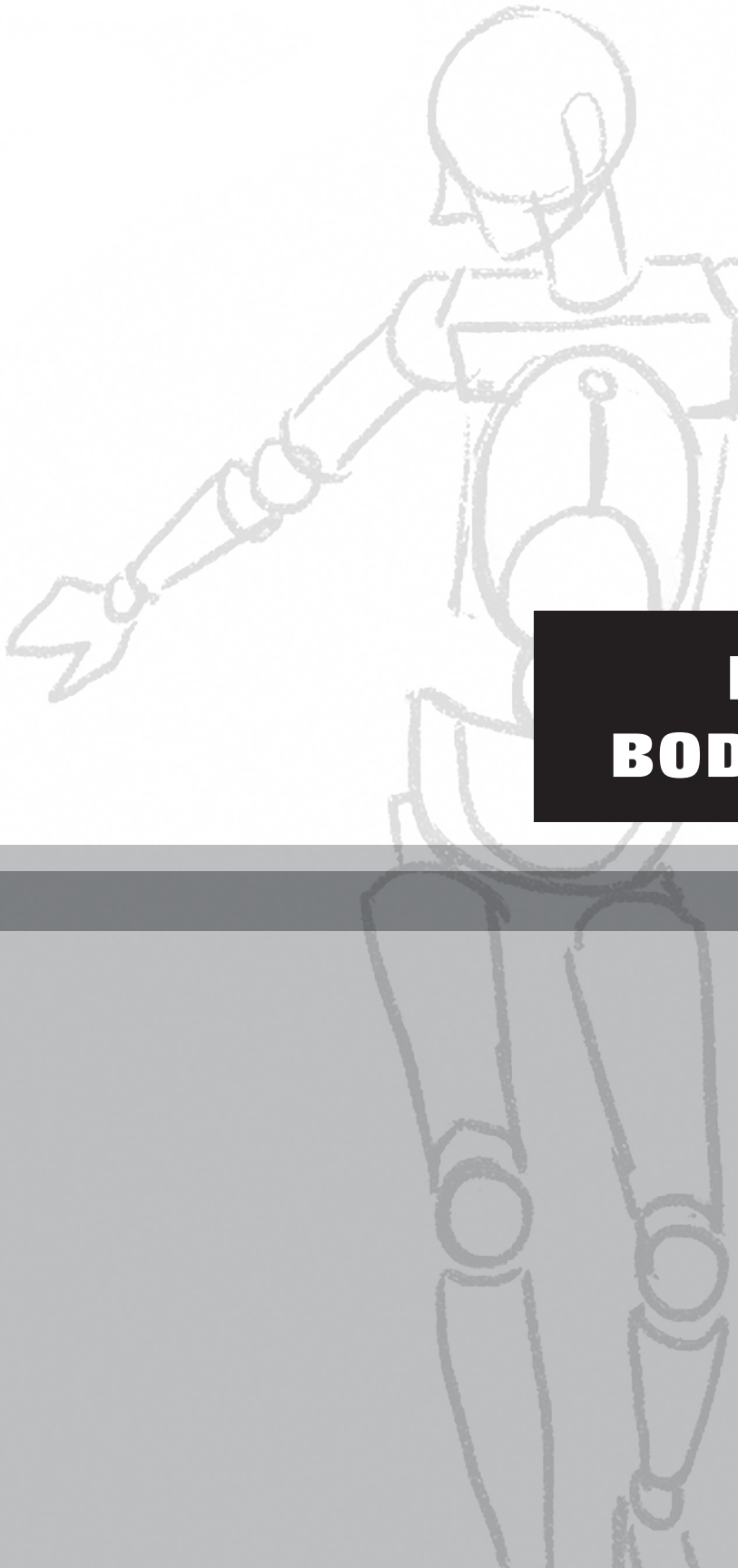
WEEK 1 starts with drawing simple shapes and volumes, next you'll delve into basic body forms and learn the importance of reference images, culminating with a solid grasp of body measurements.

WEEK 2 enhances your drawing skills by teaching line strokes, then how to master the line of action and balance in figures. You'll explore mass, weight, and rhythm, and the most effective ways to add expression and movement to your figures, with expert advice on life-drawing skills.

WEEK 3 focuses on detailed anatomy lessons for specific body parts, including a lesson in bone, muscle, and fat composition. The week concludes with advice on practice sessions to continue your study of anatomy.

So let's dive in and start your journey to mastering anatomy in just 21 days!





DRAWING BODY FORMS

DAY 1 TO 7

DRAWING SIMPLE SHAPES

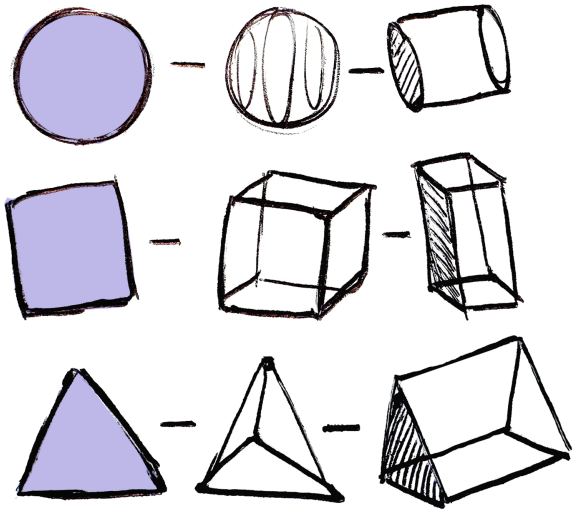
DAY 1

WITH RODGON

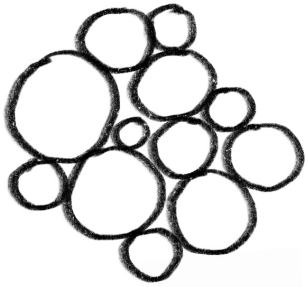
Learning anatomy and how to draw a complex form like the human body can be intimidating. That's why I recommend you start by drawing three simple shapes you are already familiar with—circles, squares, and triangles. These geometric shapes will become the foundation for more complex body structures. So if you feel a little nervous about drawing a human body—*this book is for you!*

Let's grab a sketchbook, pen or pencil, and begin by fine-tuning our sketching skills. Start with drawing a circle—in as many different sizes and widths as you can. Try to fill several pages to practice. Once you feel confident drawing these circles, you can learn how to apply volume to make images that are three-dimensional instead of flat. These are the first steps to make artwork that has more visual interest and appeal. Don't worry too much about drawing your shapes perfectly. What is most important is practice—to build confidence and better hand control. These exercises are all you need; improvement will happen naturally as you practice.

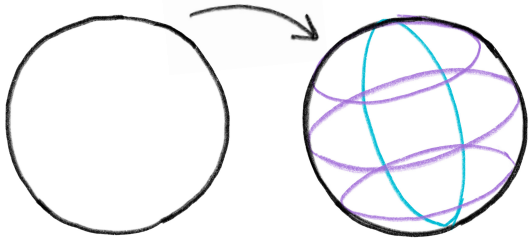
For now, I'd like you to sketch using lines—without adding any shading or shadows. This helps you visualize the structure and volume of objects more clearly. For example—if I draw a circle, then add a vertical circle inside, and a few more horizontally—it makes a globe or sphere shape (see right).



I mainly use circles and squares to draw human bodies. These shapes form spheres, cylinders, and cubes. There are a couple areas of the body where a triangle or pyramid is well suited—the nose and feet.



DON'T WORRY IF YOUR SHAPES ARE NOT PERFECT— JUST KEEP PRACTICING!



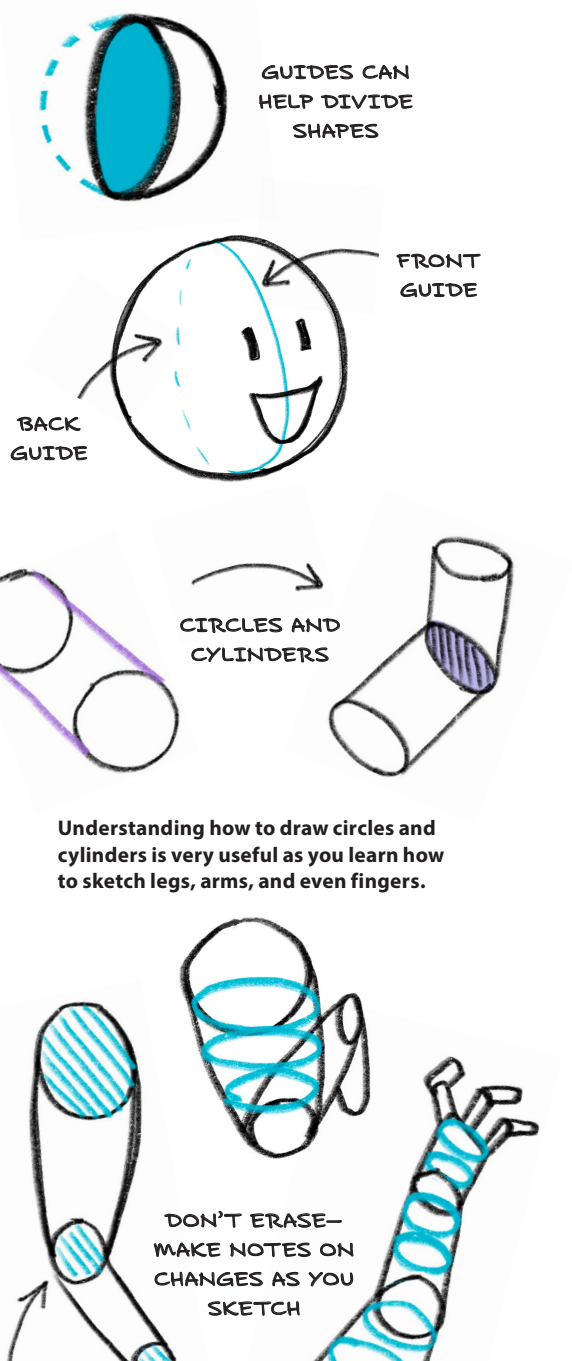
CIRCLE TO SPHERE

Doing so transforms a two-dimensional circle into a three-dimensional sphere *simply by drawing a few lines!* This is a powerful concept, so let's review in more detail. When you add a second circle inside, it creates a guideline that can be used to adjust the shape. We can divide it into sections, or decide which area is the front, allowing us to visualize the back. Guidelines can also provide us information we need to position anatomical features on the surface of a sphere, such as eyes and a mouth.

What else can we do with simple circles? If we draw two circles next to one another, then connect them with lines we have a three-dimensional cylinder. A cylinder can be linked with others to form the structure for a leg, an arm, even individual finger shapes. By attaching circles and lines of different sizes, you begin to develop objects that show dimension and perspective (see examples at right).

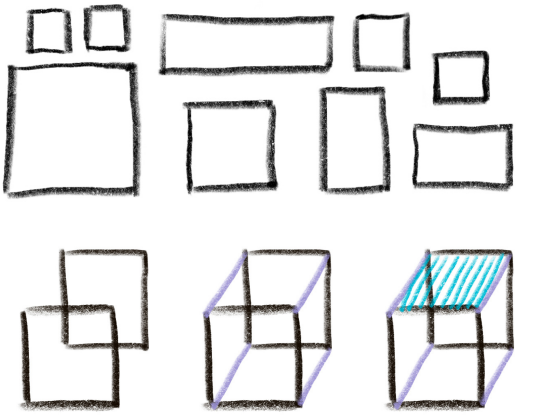
At this stage, I'd like you to focus on sketching a wide variety of circular shapes. Then practice connecting them with lines in different ways. Play around by changing the size and width of the circles and the line length to get a sense of how this alters the forms. See what you can create *and have fun!*

PRO TIP: Your sketchbook is a learning tool. If you draw something you want to change, don't erase it. Instead write notes about changes you want to see. This will help you learn so you can make improvements in your next sketch. Be proud of your efforts in learning to draw—this is a key to success!



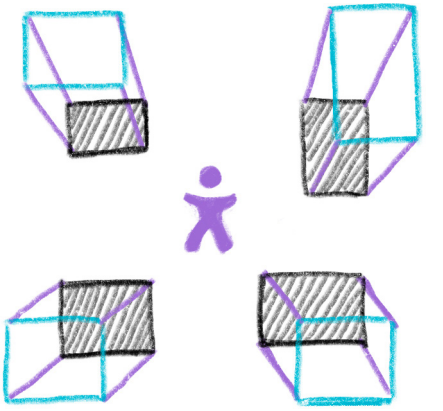
Understanding how to draw circles and cylinders is very useful as you learn how to sketch legs, arms, and even fingers.

Let's move on to our next shape—a square. Practice your sketching skills again by drawing squares and rectangles in a variety of sizes. This isn't too difficult, and a great way to warm up for drawing. After you've sketched to the point you feel confident, draw two squares that overlap. Using straight lines, connect them at the corners to make a three-dimensional box shape. You can add lines or a color to highlight different sides of the box to better show dimension (see right).



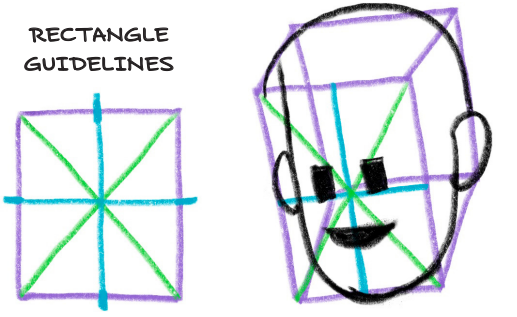
SQUARES TO BOX SHAPE

I want to share an easy way to practice sketching boxes. Draw a small figure and around it draw rectangles in different sizes (in blue). Draw a second rectangle, slightly smaller and closer to the figure (in black), then add connecting lines (in purple). This exercise shows how to sketch boxes at a variety of angles by rotating them around the figure. You can experiment by changing the size and placement of the rectangles.



BOXES IN PERSPECTIVE

Similar to spheres, rectangles are useful for making guidelines. First, draw a square (see lower right in purple), add lines from one corner to the opposite to form an X at the center (in green). Then draw a cross through the center to mark the midpoints (in blue). These guides can help you find midpoints for objects drawn inside rectangles and box shapes. This is especially useful because it works even when objects are at an angle. Understanding how to contstruct midpoints is important for sketching heads, faces, and many other areas of the body where you want a uniform look.

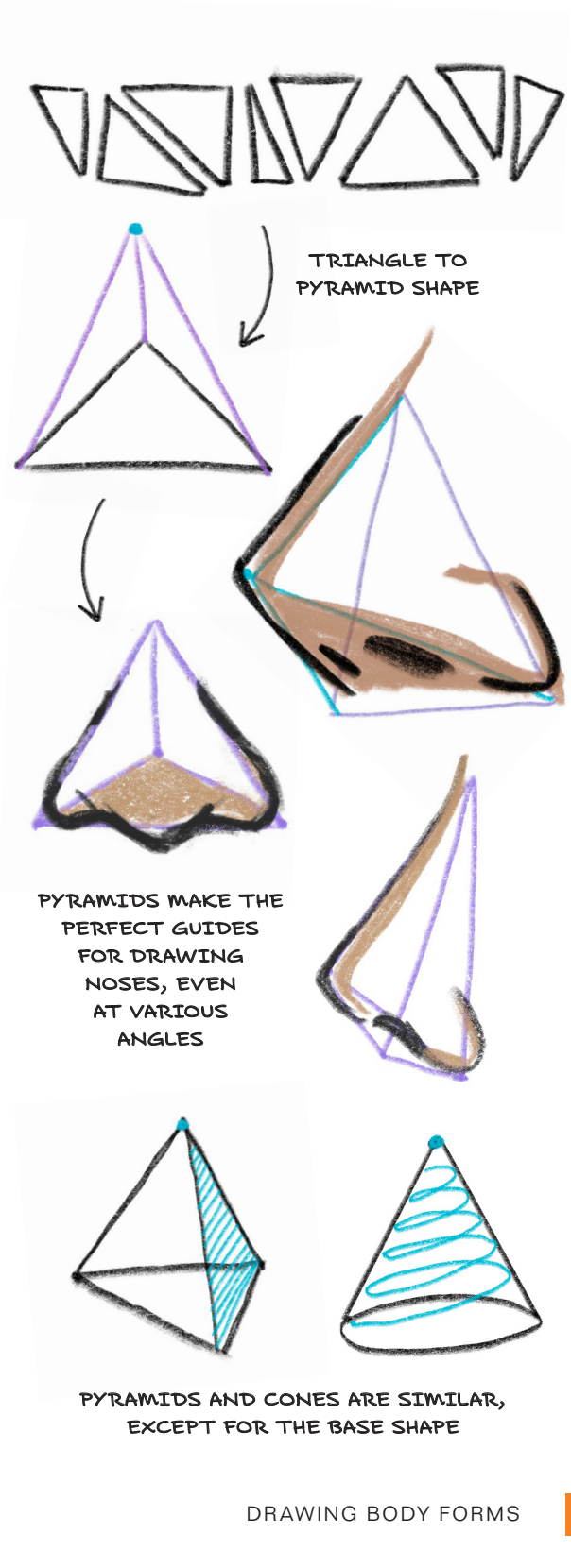


To determine the center and midpoints, draw a rectangle then add guidelines (see above). Similar to guidelines created with a sphere, we can use guides in rectangles to position body forms and features.

At this point, we've covered techniques to sketch guidelines using both spheres and boxes. Together these form a system you can use to map out shapes that make up a human body.

Our third shape—a triangle—is not used as often for drawing human bodies, but it is useful in a couple of specific areas. I use triangles mainly as guides for drawing noses. (Later in this book, triangles are used to sketch the structure of feet.) Using the same process as the earlier shapes, I start by sketching triangles in various sizes. I focus on drawing clean lines and try to connect lines at the corners.

Next, I place a dot and then draw three lines that connect to each corner. Now we have another three-dimensional form—a pyramid. Pyramids make the perfect guides for drawing noses. You can create all sorts of nose shapes at various angles (see examples at right). I need to mention one final shape that is similar to pyramids—cones. To draw a cone, you start from a round base instead of a triangular base (see bottom right). Cones are used to sketch limbs in the Day 2 lessons!



EXERCISES DAY 1:

1. **Draw circles, squares, and triangles in different sizes. Take time to draw accurately, using clean lines that connect. Practice until you feel a sense of mastery, because the ability to draw these shapes is fundamental in future lessons.**
2. **Sketch spheres, cylinders, boxes, pyramids, and cones in a variety of sizes and angles. Add guidelines to indicate volume and perspective. Remember not to worry if your sketches aren't perfect, just make notes *and keep practicing!***

SHAPE VARIATION AND DEPTH

DAY 2

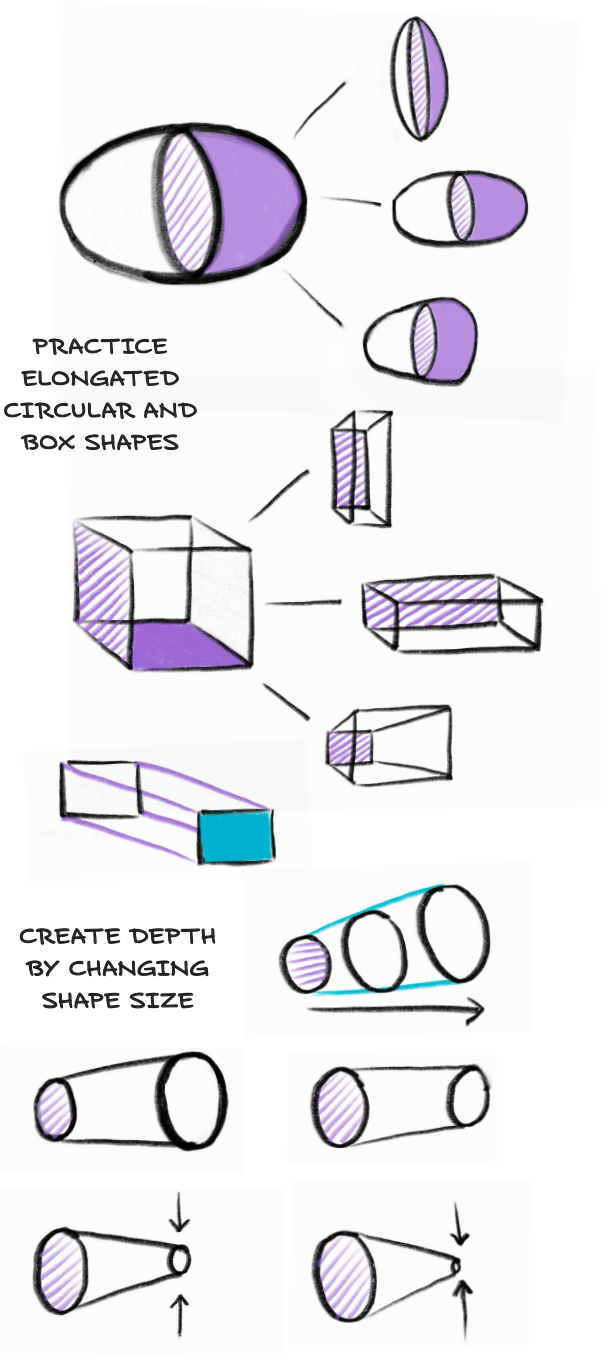
WITH RODGON

After you've mastered sketching simple geometric shapes, it's time for the next step—adding variation and depth. So once again, grab your sketchbook, a pen or pencil, and let's take your drawings to the next level!

SHAPE VARIATION

Up to this point, we've focused on a few geometric shapes we all know well. Now I'd like you to adjust your shapes in interesting ways. Maybe try elongating a circle or extruding one side of a box. Then practice what you learned on Day 1 by adding guidelines to show volume. Gaining the flexibility to create volume in irregular shapes is an important skill that applies directly to the forms you will draw for a human body. It also helps you develop an eye for creating a sense of three-dimensional space in your drawings. *What does this mean?*

In the cylinder sketches on the right, a sense of depth is generated by changing the size of the circles. Drawing progressively larger circles after smaller ones produces an illusion that an object is coming toward us. The reverse is true—by connecting smaller circles, we can create a shape moving away. This process applies to body shapes such as arms, legs, and fingers so they have the appearance of moving in space.



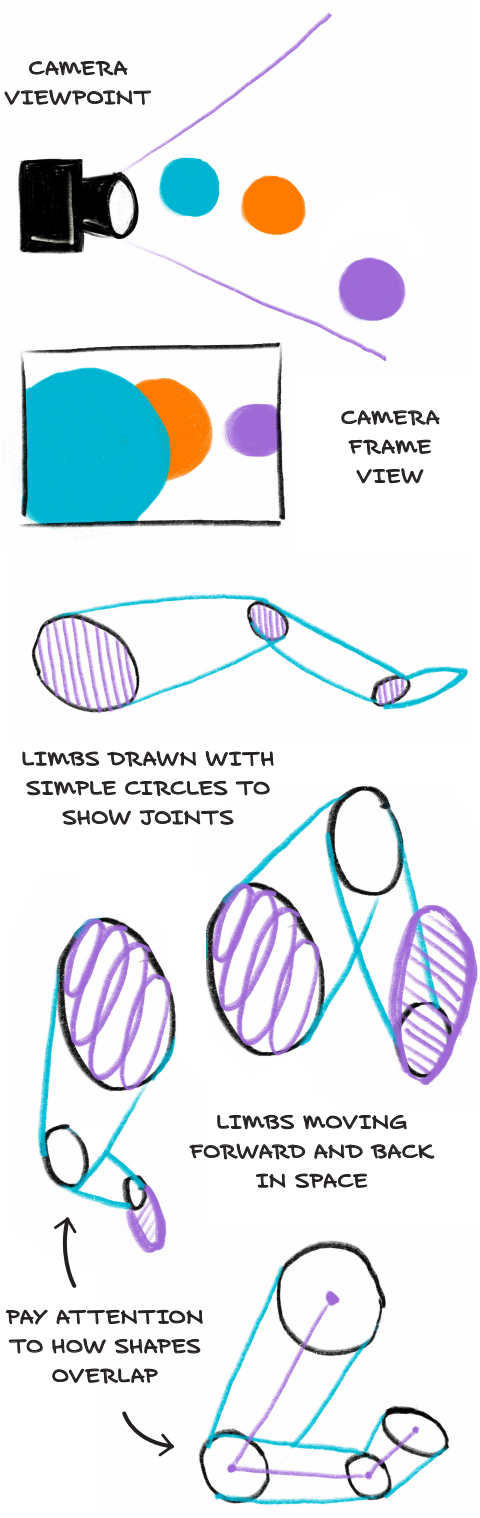
SIMPLE FORESHORTENING

In order to draw a human body correctly, we need to understand how body parts move and change within three-dimensional space. Foreshortening is a perspective technique that allows us to create the illusion of depth in our artwork. On the right is a sketch showing a camera and a few circles to illustrate how the amount of space an object fills in our view changes our perception of size and proximity. Basically, the larger an object appears to us, the closer it looks from our perspective.

Another difficult aspect in drawing human bodies is making them look *dynamic*—as if they are actually moving in three-dimensional space. In figure drawing, action can be created when a body looks as if it is coming toward or moving away from the viewer. An exercise to practice this concept is to basically play connect the dots by drawing circles and connecting them with lines. Try this by sketching circles in various sizes going in different directions. When you connect these circles, they can begin to appear as if they are moving.

When you simplify arms and legs to almost a comical level, they have two main sections—the top and bottom with hinges at the joints. These you can draw as simple ovals. By sketching body parts as simple cylinders, it makes them much easier to bend and move around. This will help you learn how limbs move, which is a key component to understanding anatomy and posing figures.

Be sure to pay close attention to any overlapping areas of the body. Correctly drawing how body shapes overlap is another way to generate depth in your figure drawings. This can be confusing at first, but remember to simplify down to basic shapes and connect them. This concept about overlapping shapes is revisited in more detail later in the book.



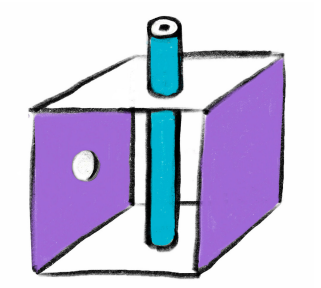
DRAWING THROUGH SHAPES

In the sketch on the right, the first box shape has a cylinder coming out at the top and an opening on the side. Sketching compound shapes like this prepares you for drawing more complex body parts such as arms, hands, and ears. I like to describe this process as *seeing through* or *drawing through* shapes. Basically, the idea is to visualize the shapes as you draw them as if you have X-ray vision. You can use different colors to help visualize separate areas and how they connect and overlap.

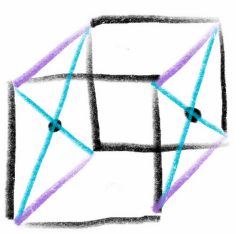
Let me explain using an example—to draw a human head, I begin by sketching a sphere (green), add a flat circle at the side of the head (purple), and a flat square area at the front as the face (blue). You can see how simple shapes work together to make the head shape.

By drawing through my shapes, I can better position elements in three-dimensional space. Remember from Day 1 how to use guidelines to find midpoints. Finding the median lines to show volume also helps me see through my shapes and correctly place eyes, mouth, or ears. After I have placed the facial features, I simply erase the guides, and my drawings will have correct perspective.

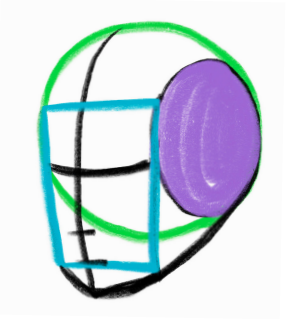
This process becomes invaluable for drawing the human body at different angles and poses. For now, I'd like you to practice finding



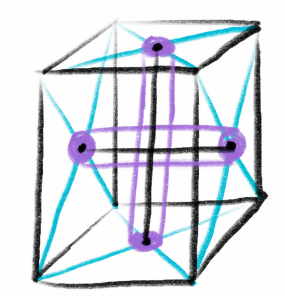
COMPOUND SHAPES

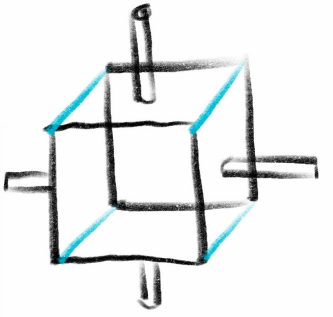


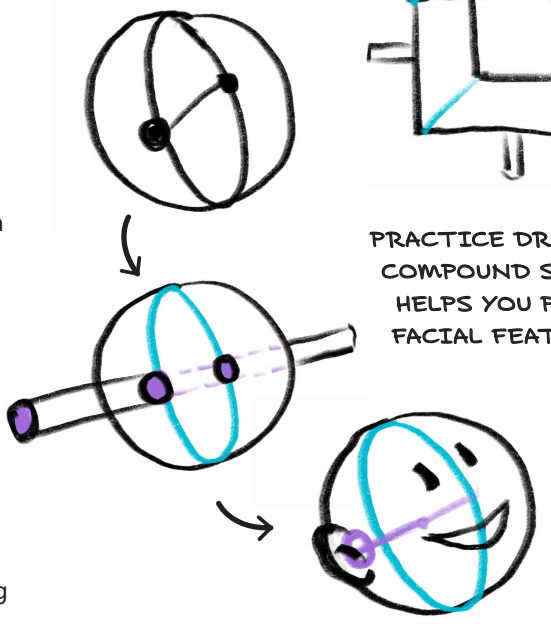
USE CROSS GUIDES TO FIND MIDPOINTS ON FOUR-SIDED SHAPES



MULTIPLE SHAPES CAN BE USED TO CREATE BODY FORMS



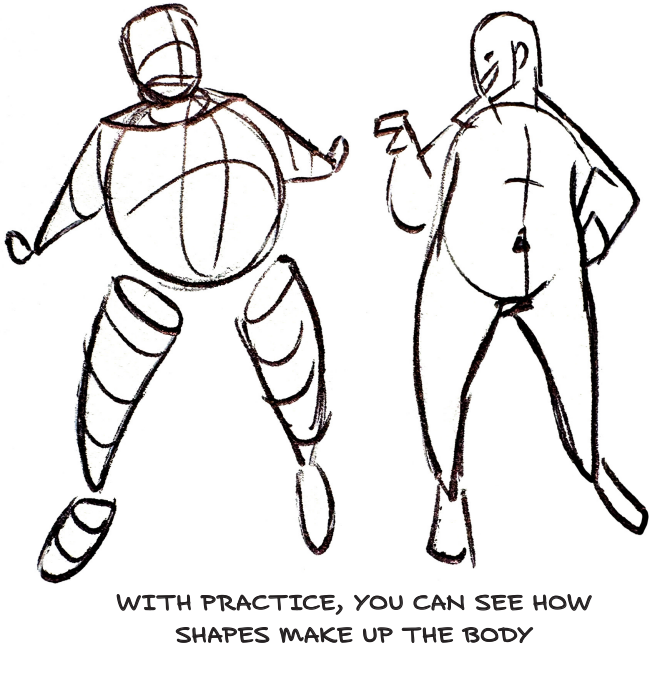




PRACTICE DRAWING COMPOUND SHAPES HELPS YOU PLACE FACIAL FEATURES

volume using more complex objects. It is most important to simply repeat these steps using a wide variety of shapes at different angles to practice finding volume, then seeing through the shapes. This is the best way to develop an eye for creating volume and dimension in complex objects.

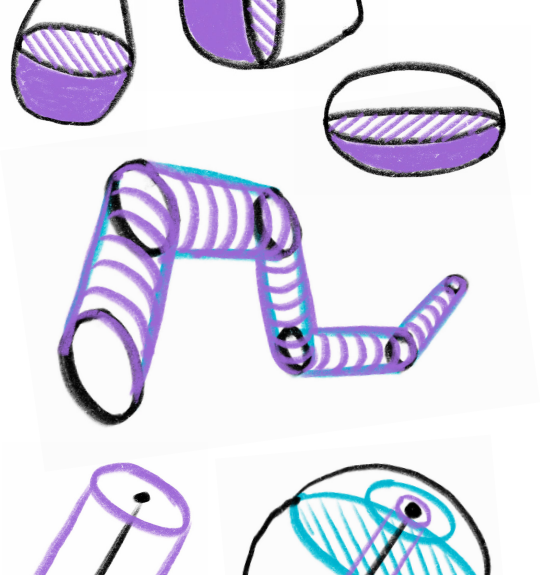
Get creative and have fun drawing different kinds of forms—the next step will be learning how to use these shapes to draw the entire human body!



WITH PRACTICE, YOU CAN SEE HOW SHAPES MAKE UP THE BODY

EXERCISES DAY 2:

1. **Building on skills learned on Day 1, add variation to your basic geometric shapes. Practice drawing cylinders and boxes that have more elongated forms and find their volumes.**
2. **Experiment with cylinders and boxes of different sizes and connect them at various angles. Practice many variations so you can discover how this affects the volume and perspective. Pay attention to overlaps in your forms. You can add lines or color to show which areas of a shape are in front. Practice this process as much as you can—you can add cone and pyramid shapes too.**
3. **Draw using the process of seeing through the shapes. Add volume guidelines and play around with different forms coming in and out of your shapes. Be sure to practice until this concept clicks for you—this will help prepare you for drawing more complex body forms.**



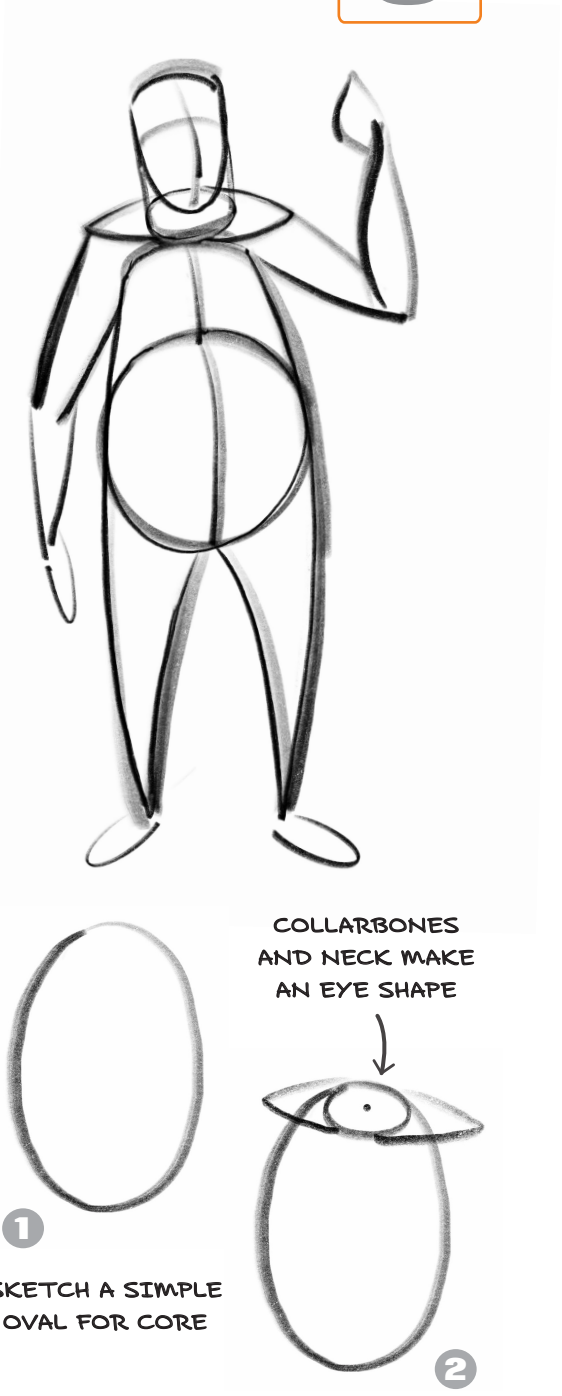
BASIC BODY STRUCTURE: PART 1

DAY 3

WITH RODGON

The human body's intricate structure is complex and drawing it can be overwhelming. It certainly was for me when I started learning to draw figures. To help myself feel less intimidated, I studied many methods over the years, eventually I developed a system using the basic geometric shapes we just studied to simplify body structures to almost a comical extreme. This method has worked well for me as an artist, and I hope it is helpful to you too!

Why is the human body so complex to draw?
Our bodies are constructed from many unique forms, textures, and a sophisticated system of moving parts. It took me a long time to come to a place in my career when I was comfortable drawing anatomy. Much of my early anatomy instruction plays little to no role in the system I use to draw bodies today. That is because those lessons didn't make sense to me. The moment I began to more closely observe bodies in life, I started to understand the complex puzzle that makes up a human body.



HOW BASIC SHAPES BUILD A BODY

The first piece of the body puzzle is the *core*. Body parts connect to one another similar to a Lego block system. I start with the core—by sketching a simple oval (1).

Second, I add collarbones (2), which can be quite tricky to draw. However, I've discovered a simple shape that works well and also provides me with the perfect location to place the head and neck too! I use a circle and two triangles which creates an eye shape.

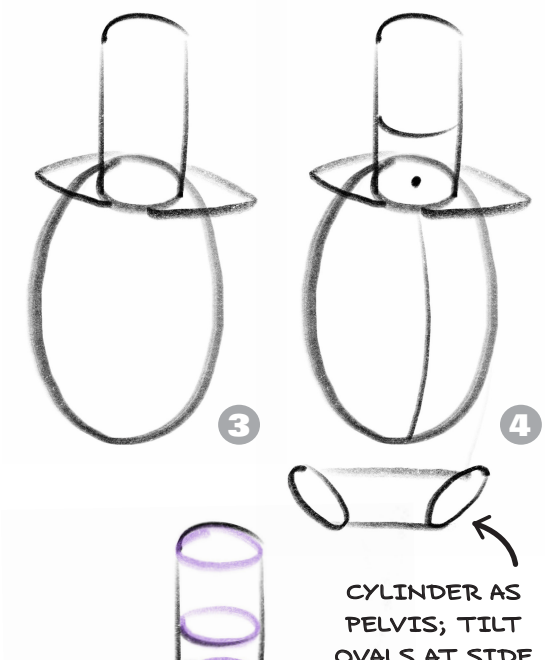
Now I have a base for drawing the neck and head (3). I prefer to use a cylinder for the head and neck shape, but you can decide to use a more square shape if you like. This depends on personal preference, so feel free to customize the shape to your style.

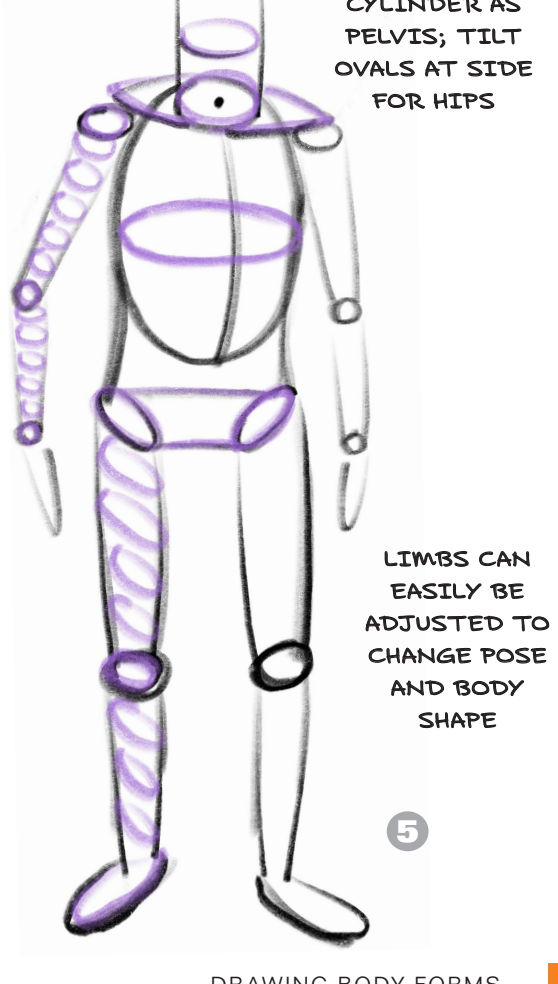
With the torso in place, I move to the pelvis and hip joints (4) by making a horizontal cylinder shape. By angling the circular ends of the cylinder slightly, it forms a shape similar to underwear. This shape is easily adjusted to create variations. Larger ovals will give you wider legs, and the length adjusts to fit a wide variety of body types as well.

Next, I work on the limbs. The arms and legs are an area where you can practice foreshortening to move the joints and develop different angles and perspectives to give the illusion of movement. As we covered in Day 2, simply adjust the circle size and spacing of your lines to show depth and movement.

Similar to legs, arms do not come out from the core, arms are attached at the shoulders which are connected to the collarbones. From here, the body can be completed with hands and feet using simple shapes to represent each.

Later in this book, you will take a deeper dive into how to draw each body part, but what I want to provide you here is an approachable system for sketching an entire human body. With this system, you can begin by learning how to pose and move human bodies. On the following page, I have some exercises to help you gain confidence in these steps. Please be patient, it takes time and practice to master these exercises. Remember to have fun—because that is key to learning and creating art you enjoy!

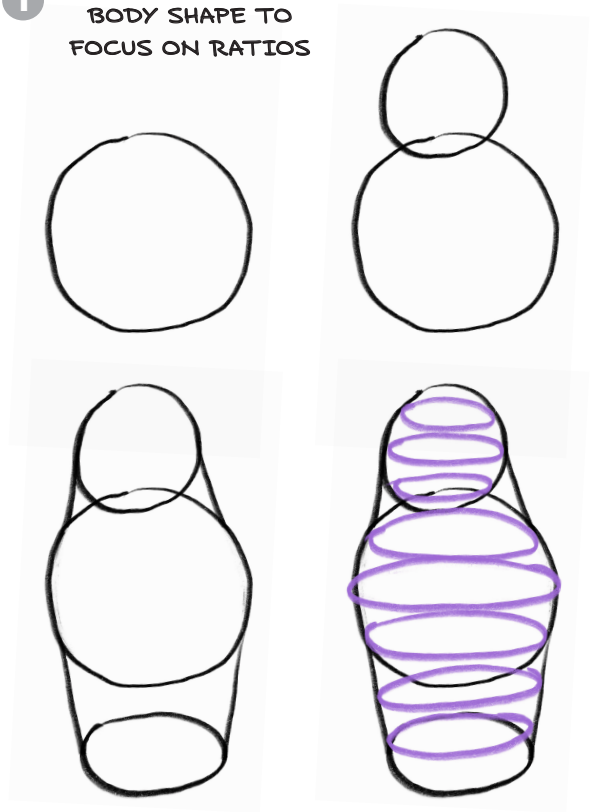




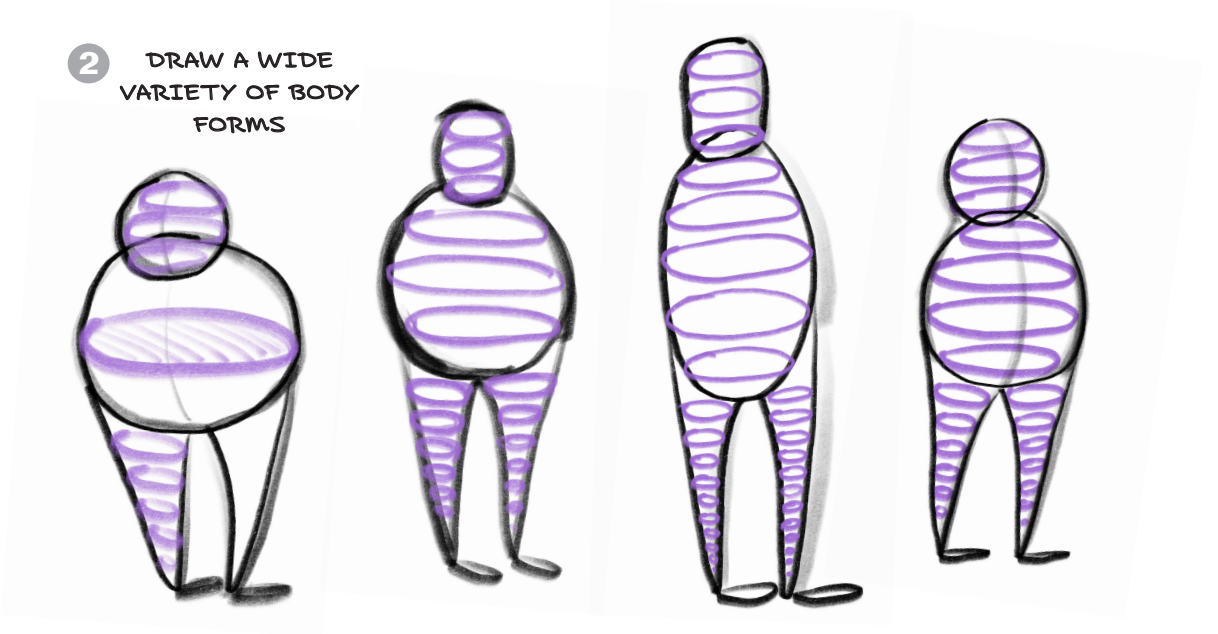
EXERCISES DAY 3: **For today's practice, I'd like you find a location where you can view many different body types, such as a park or shopping center. Carefully observe the body shapes you see as you sketch:**

1. **Start with a circle for the core, then draw a second for the head. Pay close attention to the ratio of head when compared to the core. Add a third circle for the base of the figure. Practice drawing as many different body forms as you can.**
2. **Going into slightly more detail, draw your core circle, then two cones for legs, add a head in a cone or square shape and add volume lines. Practice this enough to fill pages of sketches so you develop a sense of the wide variety of human body proportions.**

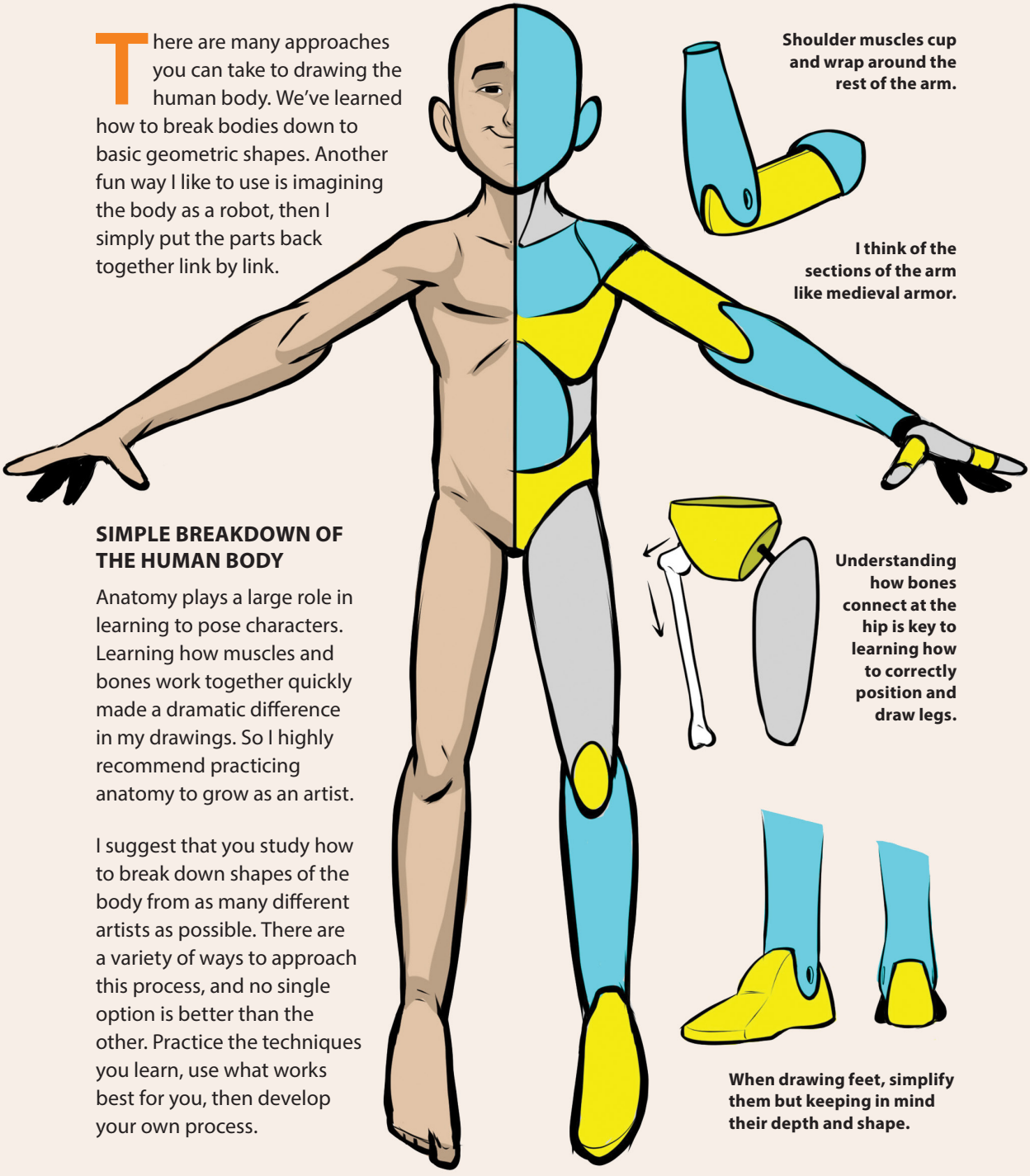
1 SIMPLIFY THE BODY SHAPE TO FOCUS ON RATIOS



2 DRAW A WIDE VARIETY OF BODY FORMS



There are many approaches you can take to drawing the human body. We've learned how to break bodies down to basic geometric shapes. Another fun way I like to use is imagining the body as a robot, then I simply put the parts back together link by link.



Shoulder muscles cup and wrap around the rest of the arm.

I think of the sections of the arm like medieval armor.

Understanding how bones connect at the hip is key to learning how to correctly position and draw legs.

When drawing feet, simplify them but keeping in mind their depth and shape.

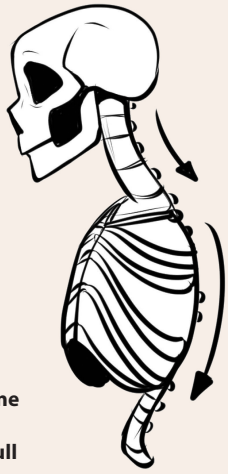
SIMPLE BREAKDOWN OF THE HUMAN BODY

Anatomy plays a large role in learning to pose characters. Learning how muscles and bones work together quickly made a dramatic difference in my drawings. So I highly recommend practicing anatomy to grow as an artist.

I suggest that you study how to break down shapes of the body from as many different artists as possible. There are a variety of ways to approach this process, and no single option is better than the other. Practice the techniques you learn, use what works best for you, then develop your own process.

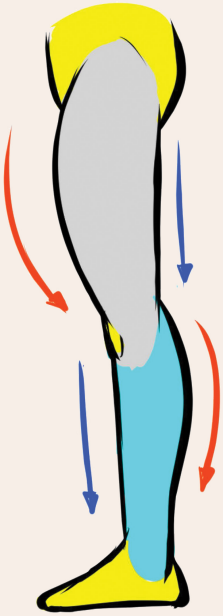
DRAWING A BODY IN PROFILE

When you draw bodies using a side angle viewpoint, the form changes a bit, especially between women and men. Here are my top tips to help you improve posing when you are drawing side angles.



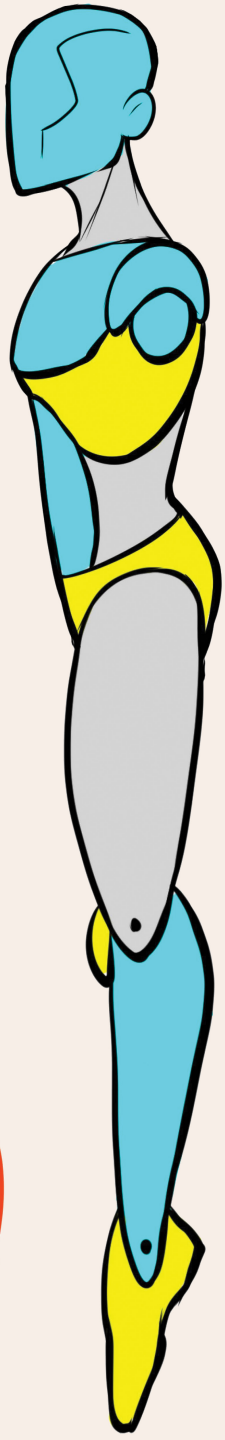
As you simplify the head shape, be sure to use an actual skull for visual reference.

Note how the spine comes out of the bottom of the skull at a curve. This is one aspect many people miss, and it is very important.

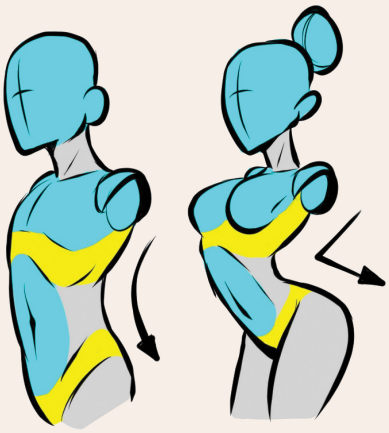


Legs have both a curved and a flat side. Keeping this in mind will help you nail tough poses.

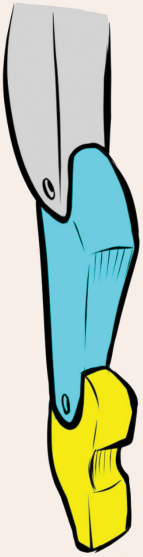
The use of color coding in these body studies is a massive help so that you don't forget a section of the body.



Differences in body angles between men and women:



As you can see, we often draw women with a more pronounced back curve which makes a character look more sensual.



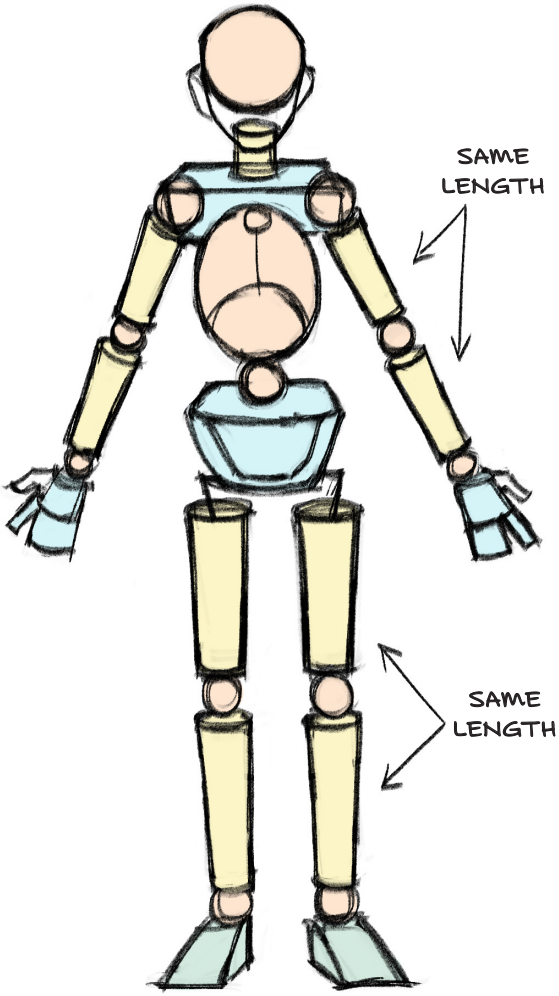
Think of legs as links that connect, and it will help you understand positioning. This makes drawing complicated poses easier as well.

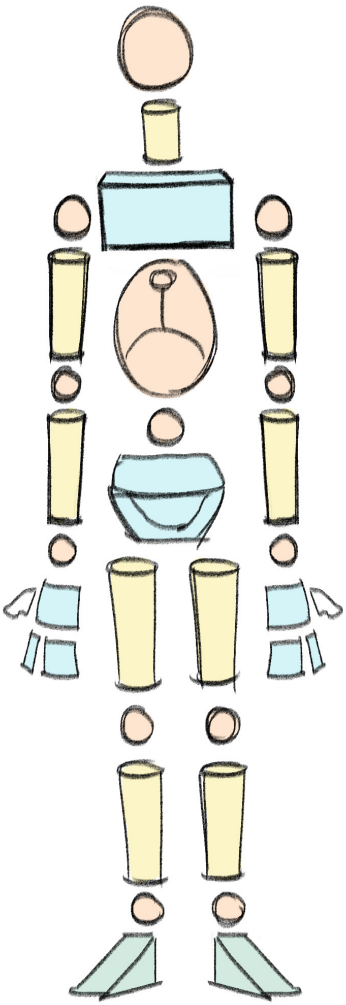
BASIC BODY STRUCTURE: PART 2

DAY 4

WITH NEIMY KANANI

When you begin figure drawing, I recommend using only basic forms. This is much easier because you are working with familiar geometric shapes: cylinders, circles, ovals, triangles, and rectangles. This method works with both male and female body forms, so try to avoid being distracted by differences in body types. While all bodies are unique, they contain the same structures. Instead, simply focus on learning this drawing process.

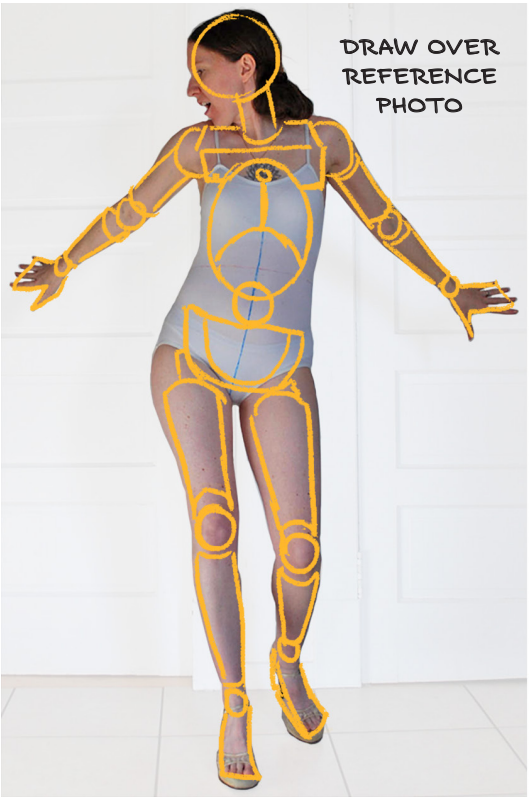


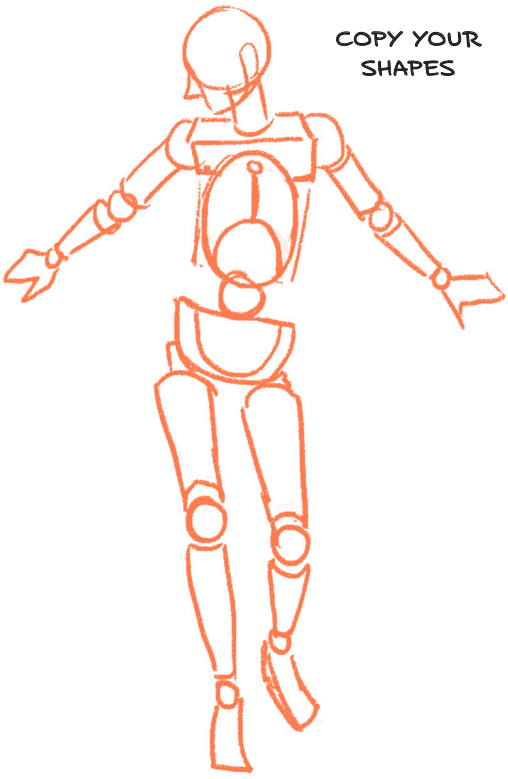


GEOMETRIC SHAPES

Start with a circle for the head, work downward to the neck, shoulders, torso, pelvis, followed by limbs, then finish with the hands and simple triangles for feet.

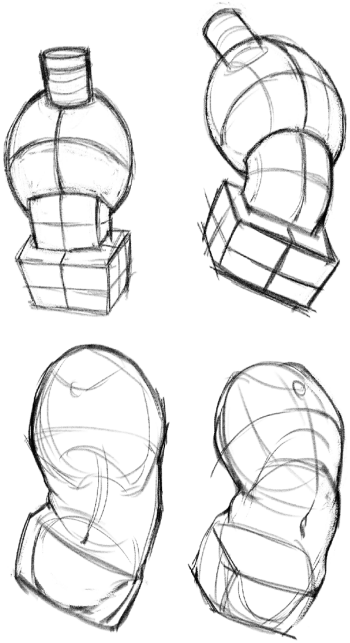
PRO TIP: At this step, focus on basic shapes, not details.





Draw the larger shapes in a pose and be sure the angle of your shapes are correct. For practice, copy your shapes onto a blank page.

Using this method as a guide, draw shapes over a reference photo of a human figure. I recommend starting with the head, then move downward to the torso, pelvis, followed by the limbs. Don't worry about details like the face at this stage. Practice this technique by copying your shapes on a blank paper. This method is similar to using a wooden human figure as a guide. Once you understand how these basic shapes can create a human form, you can apply this process to all kinds of poses.



EXERCISES DAY 4:

1. **Find a reference photo and draw over the figure using simple shapes.**
2. **Practice by drawing your shapes again using a blank page.**

DAY 5

USING REFERENCE IMAGES

WITH RENÉ CÓRDOVA

I highly recommend using reference photos for drawing bodies, especially when you are learning about anatomy. It is easy to find body reference images online, and they can be helpful. If you have a specific body pose in mind, however, there is nothing better than asking someone to model for you. Posing a live model allows you to capture just the right angle, emotion, and energy in your reference image. You can ask friends and family to model for you, or they can take photos of you in the poses you want to draw.

I like to have photo shoots outdoors in open spaces, such as a park setting that has good lighting. This helps me to clearly see the models and allows enough room to move around. I ask models to try different poses by moving slowly and holding each pose for a few seconds. This gives me time to consider each pose and take random photos that will be useful for anatomy and sketching studies.

When I see an engaging pose, I ask the model to hold it for a little longer so I can take photos of the same position from different angles. This is helpful back in the studio as it allows me to draw from different viewpoints and apply perspective. I am looking for dynamic poses that have a lot of energy and movement because these will create more interesting designs.

Now that we've covered how to capture high quality reference photos, I'll show you how I use them to draw stylized figures.

PRO TIP: As you photograph models for reference images, be sure to take shots from different angles to help you view the perspective correctly back in your studio.





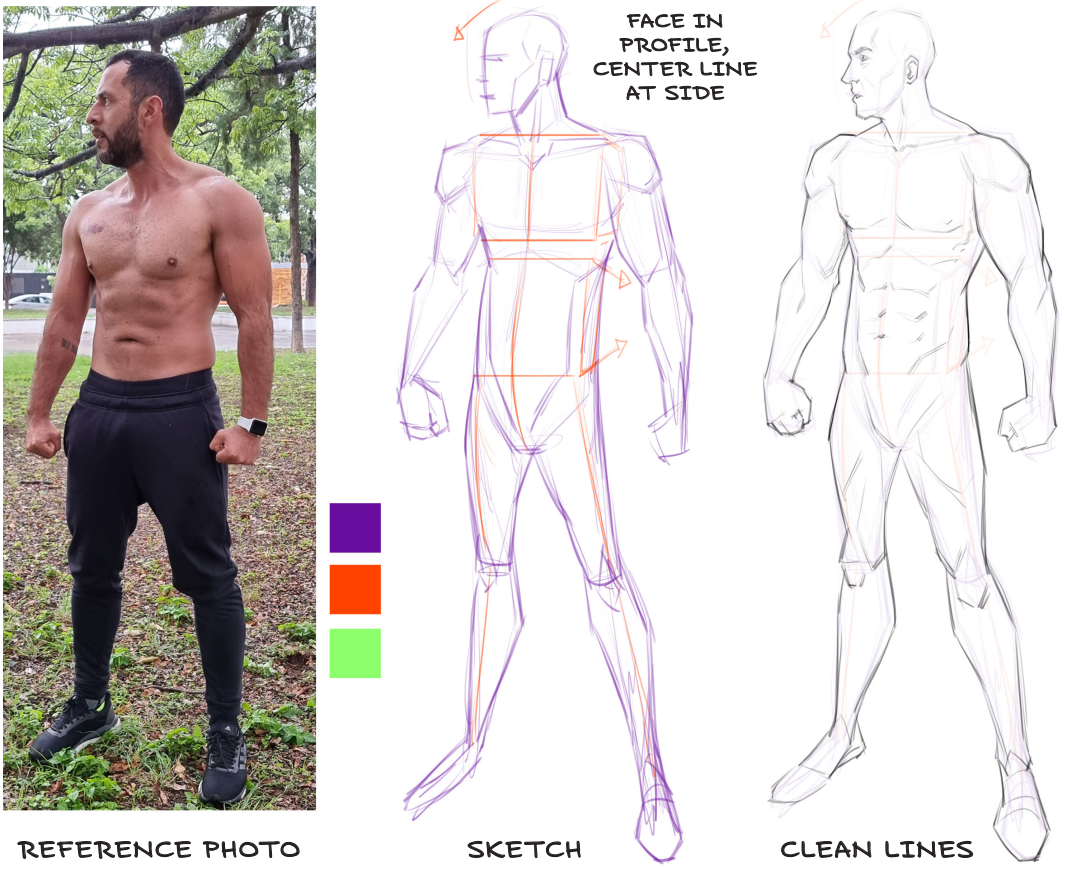
Taking your own reference photos can help you draw poses and human anatomy correctly.

DRAWING FROM REFERENCES

I work with a XP-Pen Tablet and Photoshop, but these lessons can apply to traditional mediums. I start by sketching in color, typically red or purple, instead of black. The color allows my sketch to become a guide at the clean lines step when I draw in black. Referring to my reference often, I sketch in basic lines and shapes, building, erasing, and refining as I draw. Choosing a second color (red in example below), I add guidelines—center lines in the torso and legs as well as block shapes to help with perspective. The red arrows are areas where I check body position to be sure it aligns correctly compared to the reference photo.

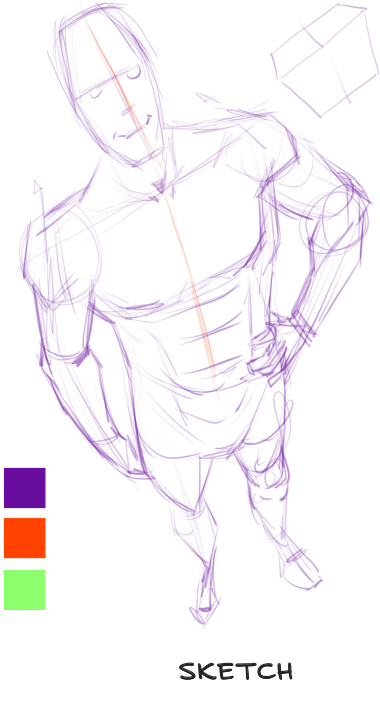
After my sketch is working well, I reduce layer opacity and create a new layer above the sketch to draw clean lines in black. You can see the lighter sketch layer underneath in the example below. The sketch guides me while creating the clean lines.

PRO TIP: I prefer to sketch using red, purple, or another color that is not black so I can easily tell my sketch lines from the black or inked lines. Remember to use different layers for sketching and a new layer above the sketch to make your clean dark pencil or ink lines.





REFERENCE PHOTO



SKETCH



CLEAN LINES

PRACTICING PERSPECTIVE

Another reason to take your own reference photos is so you can choose poses to practice specific or difficult skills. The reference above has a strong upward angle which helps me work on foreshortening.

I start by drawing lightly in color, using basic geometric shapes. Then I refine the body structure, erasing lines that are not working and darkening those I want to keep. I add a center line in red to guide me as I check and revise the sketch. To better visualize the perspective, I draw a small rectangle next to the torso. Comparing my work to the reference photo often makes a big difference in the quality of my final character drawing.

The model's arm and hand position in this pose are helpful for practicing perspective. Look at the way the hand wraps around the volume of his waist and hip. I want to draw the fingers wrapping in this area correctly, so I revise my sketch several times until the fingers are positioned properly. I compare my sketch to the reference photo to be sure the perspective and anatomy are working. This is essential to the believability and function for even a very stylized character design.

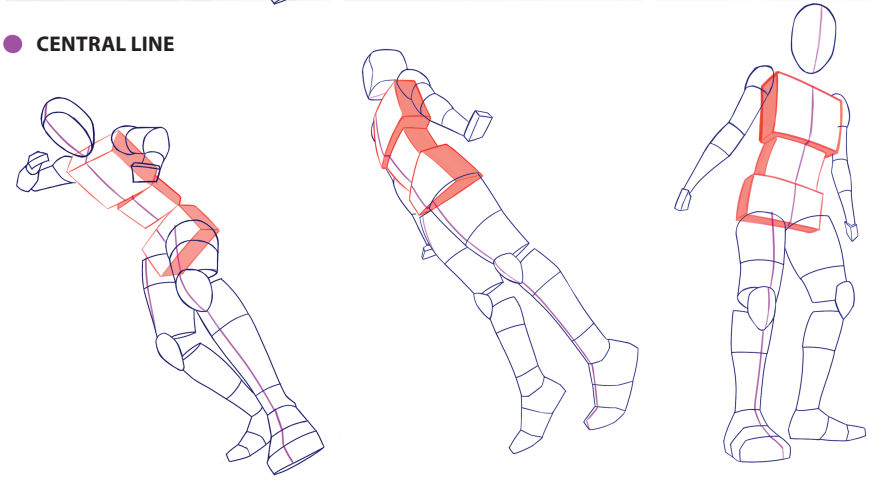
PRO TIP: You don't need to follow a reference image exactly. As the designer, you can adjust artwork for style and use.

If my character is intended for a comic, I leave the line work lighter which is helpful during colorizing. I also emphasize certain lines like the muscles, because I know this is important to comic style.

THREE-DIMENSIONAL SHAPES: The following exercise helps us understand body shape and volume. You can take photos of a relative or friend to get visual references. My daughter Nahomi helped me with these poses.

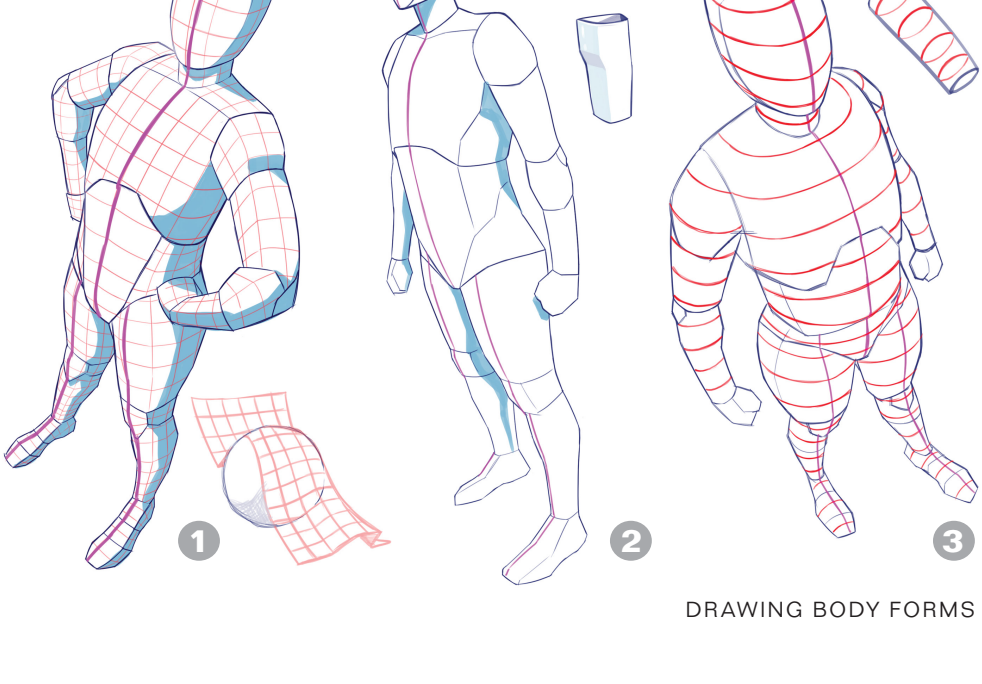


- **CENTRAL LINE**



BODY VOLUME: Below are three different methods to practice drawing the volume of a human body in perspective. Here again, I'm using photos for visual reference. To help with shading in images 1 and 2, I've indicated a light source.





REFERENCE IMAGES

WITH WARREN LOUW

I used to draw pages of a wide range of poses. These figure studies looked great, and I felt confident. Sadly, when I tried drawing from memory, the results were poor. I felt frustrated and I couldn't figure out why my studies weren't showing the results I wanted. Later I realized the issue: I was drawing plenty of studies of different poses, *but I wasn't properly learning any of them*. Instead, I made a brief study of each pose then moved on to the next. *The key is repetition!* Training for anything requires *a lot* of repetition and drawing is no different.

The following is how I draw studies on body flow, shape, and form using repetition. This involves how you feel during the process, because there is a back and forth between drawing the studies, then a review of your progress. In my six examples on the next page, the drawings with dark bikinis are drawn using the photo reference (**R**); the unshaded bikinis are drawn from memory (**M**). I chose this model because she has curvy proportions, which I enjoy drawing.

Start with two to three studies where you try to copy the model as closely as you can. Don't rush this step. Then test yourself by redrawing once from memory. You want to bring through as much as possible about the body's flow, shape, and form. Don't worry if your results are not great for now; that's to be expected. After you have drawn from memory, bring out your photo reference and copy it again, but this time at a slightly quicker pace. You may notice that you are more aware of details you missed before. Your mind is asking questions that you are starting to have the answers to.



As you progress, try to reduce the number of strokes you make. Draw your lines loose but make every stroke count. By quickening the pace, your details will not be as accurate, but that's not the point. You want to develop a feel for the flow of the figure. Depending on skill level, you will be able to draw the same pose from photo reference and memory after 10–30 repetitions. Try to increase your pace and reduce your strokes even further.

Look closely at my first attempt from memory—the line work looks a bit *hairy*, because I used a lot of strokes. On my third attempt, I use fewer strokes and build the form more efficiently. Repeat this process at least 10 times. I've repeated this process 20–30 times, and it can be draining so be sure to take breaks. On page 24, I labeled four of these example drawing styles for you to try during these studies.


R


R


M


R


M


M

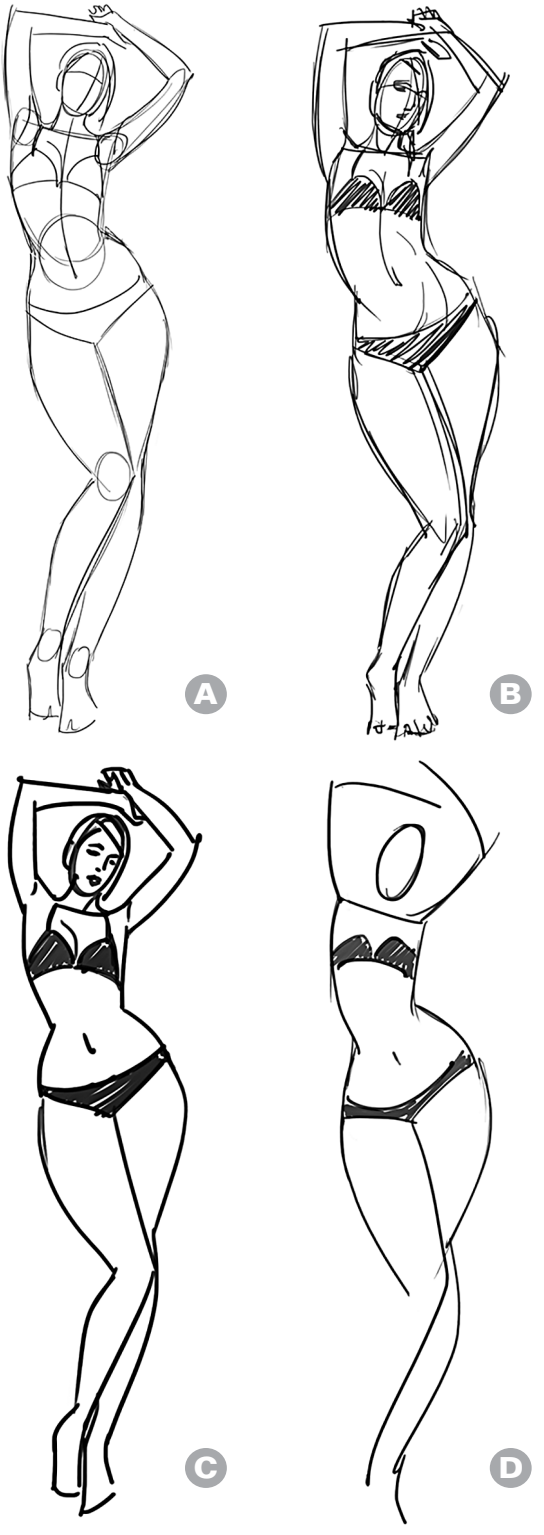
A: This drawing includes a little body construction line work to help understand the figure and pose.

B: Try drawing as fast as possible while maintaining control of your strokes. This prevents you from overthinking (which is often an issue) and instead pushes you to draw what you *feel* instead of what you *think*.

C: Focus on the straight and curved lines of the body. I refer to the photo and decide which is a straight or a curved line to simplify the structure. Notice (with limbs especially) when there is a curved line, parallel to it is a straight line. This pattern can be found all over the body and requires study to recognize how it works. Disney artists are great examples of illustrators who use this in their work.

D: Simplify the lines—here I'm focused on the flow of each part of the figure, keeping in mind the form. This style is easy to do and will help your drawings look more natural.

In closing, I want to say something on a personal level: *Go easy on yourself!* You are where you are, and you must accept that and move forward. Art should be enjoyed no matter the skill level and made for fun and the love of it.



EXERCISES DAY 5:

1. **Take your own reference photos, then practice sketching figures using them.**
2. **Practice sketching your figures using various drawing styles.**

BODY MEASUREMENTS: PART 1

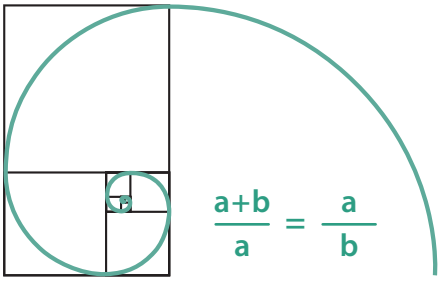
DAY 6

WITH MARIA LIA MALANDRINO

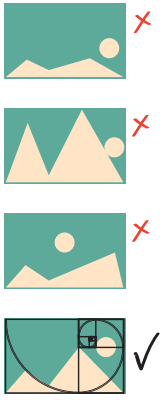
In ancient Greece, classical artists and sculptors were fascinated by the idea of finding the most beautiful proportions for the human body, so they developed a canon and applied it to the most famous art of the era. A canon is a set of proportions, the relationships or ratios, between the height, width, and depth of an object. Canons of beauty relate to a specific culture and time period, and they are constantly evolving like artistic taste, so no canon is better than another.

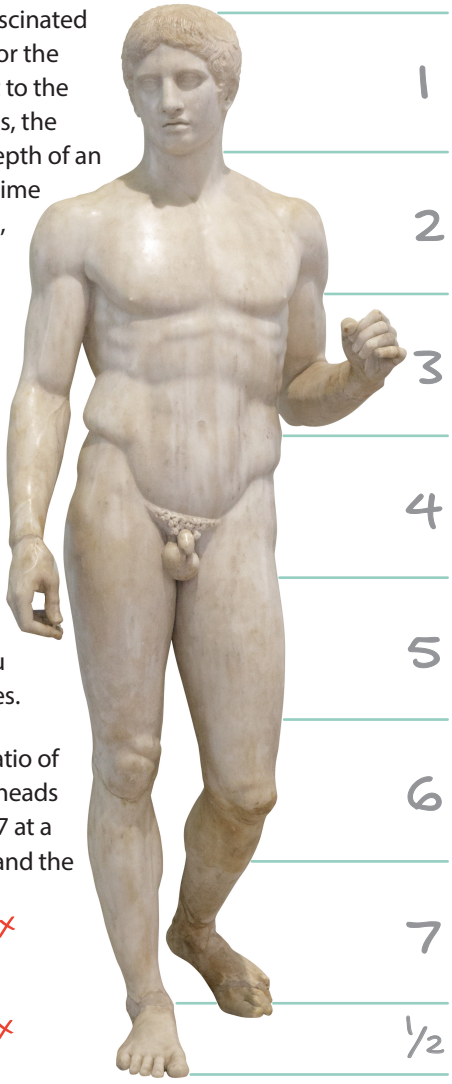
Proportions are mathematical patterns that occur both in nature and in human-made artifacts—like the golden ratio which was important to the Ancient Greeks. The golden ratio, which is part of the Fibonacci sequence, occurs when the sum of numbers (a + b) divided by the larger number is equal to the larger number divided by the smaller number (a/b). *Why is this important?* Because this pattern appears in many natural elements, like flower petals, beehives, and even the shape of shells. It is an aesthetic ratio that the human eye finds pleasant and is therefore useful when deciding the ratio for objects you are depicting, or when planning the composition of scenes.

When drawing a human, the first ratio considered is the ratio of the head to the rest of the body. If we add up the ratio of heads in the height of this statue, it is about 7½. It may look like 7 at a first glance, but when you consider the slant of the body and the bend of the knee, 7½ is more accurate.



GOLDEN RATIO: Pattern found in nature that is attractive to humans and useful for planning the design of objects and compositions.





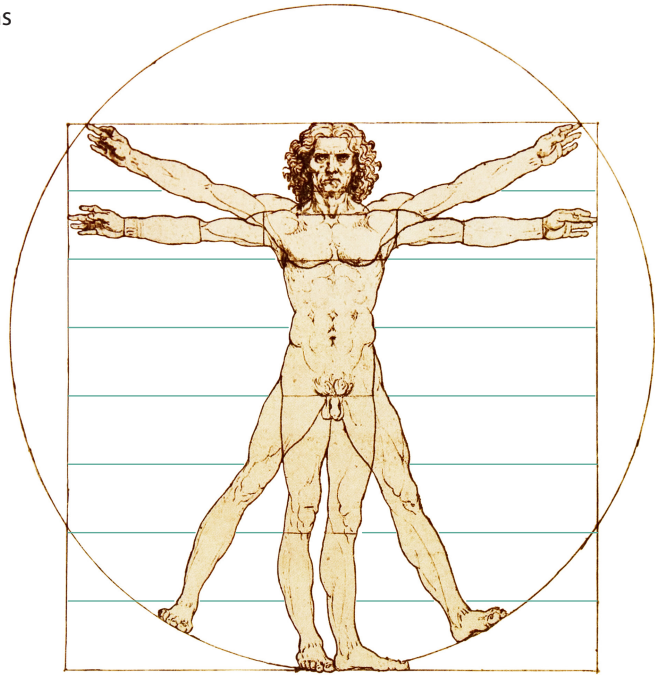
DORYPHOROS: Looking at this classic statue, we can see the Greek canon of beauty was an athlete: tall, muscular, imposing. If you add up the ratio of heads in the height of this statue, it is about 7½.

Leonardo Da Vinci also studied proportions of the human body and concluded the length of the outstretched arms and legs of a man should fit in a square and circle, developing the *Vitruvian Man*. Looking at the *Vitruvian Man* drawing, you will see that the head fits in the body almost exactly eight times.

So it's no wonder that contemporary proportions also place the head seven and a half to eight times in the height of the body. Seven and a half heads create a typical human figure, while eight heads has longer legs giving the character a more heroic look. You can change proportions according to the style you want for your characters. Let's review examples from popular cartoons and comics:

- ***Mickey Mouse*** obviously does not reflect the one head in eight ratio, but that doesn't stop him from being one of the most popular designs of all time.
- **Marvel's *Captain America*** is a more realistic-looking character and fits perfectly in the one to eight "heroic" ratio.
- **Will Vandom from Alessandro Barbucci's comic *W.I.T.C.H.*** is one of my favorite character designs and stands at five and a half heads.

Proportions serve a purpose, however, if you are creating characters with different proportions that make them more appealing, *go for it!* Understanding the basics is useful so you can then build on them and make your own rules. Next, I'll show you how to use these standard proportions to draw the human figure.



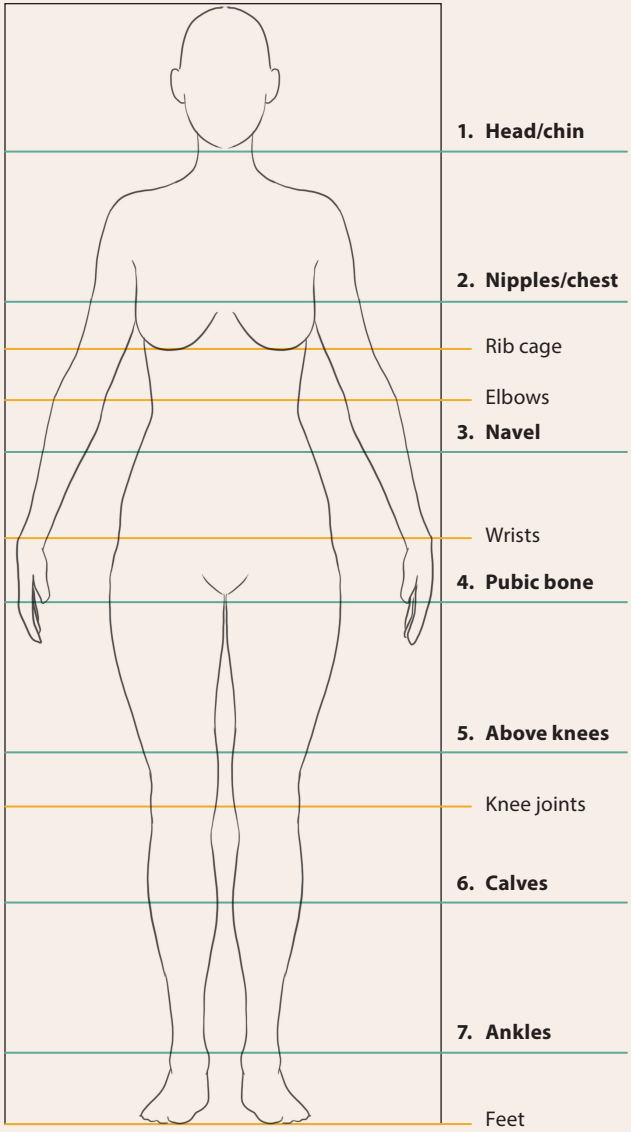
***VITRUVIAN MAN*: This Renaissance sketch by Leonardo da Vinci, c. 1490, was a study in proportions of the human body and has become an iconic symbol of western civilization. The geometric shapes are also significant, with the circle representing the cosmic and divine while the square, the earth and secular world.**

THE BODY GRID METHOD

Let's review this method—we will start by using a female character of average build (see next page). A male's face is slightly larger, but the seven and a half heads tall proportion and key points are the same. The main difference is the elbows align more squarely with the navel, since men on average have longer arms and the hips and pubic bone are lower. Men and women tend to have inverted body proportions—most women have narrower shoulders and waist with wider hips, while men are broader at the shoulders then taper down in a carrot-like shape.

These are generalizations and people don't fit perfectly to these proportions. After you understand the basics, you can add diversity by playing with these ratios to draw people with longer torsos or thighs, shorter calves, or bigger heads. It is entirely up to you.

- Two heads down is the line of the nipples/chest, then slightly lower is where to place the rib cage.
- The elbows line up just above the navel (belly button).
- Three heads down is the navel, or belly button.
- The wrists line up with the upper leg bone, where the thigh joins at the hip.
- Four heads down is the pubic bone—approximately the halfway point on the body.
- The joint of the knees is in between 5 and 6 heads down.
- The calves are around 6 heads.
- The ankles sit at 7 heads.
- Below the ankles, at roughly 7½ heads is where to place the feet.
- The width of a standard female body is about 2 to 2½ heads across at the shoulders.



EXERCISES DAY 6: Draw at least four figures following the grid method. I suggest using four grids per sheet, two for average-size figures and two for larger, heroic figures. You can use multiple sheets at the same grid size or create your own to experiment with different body proportions.

BODY MEASUREMENTS: PART 2

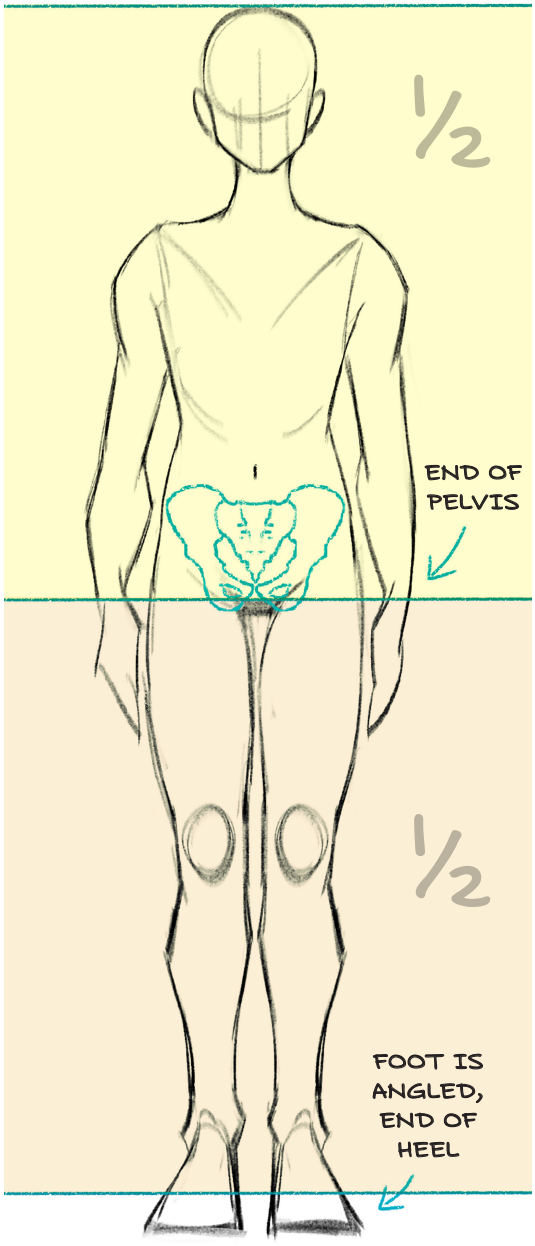
DAY 7

WITH NEIMY KANANI

Understanding how to correctly measure the human body is one of the most important steps in figure drawing. As a beginner, you cannot trust your instincts, because measurements can be incorrect without you even realizing. So it is important to learn and practice using correct body measurements and proportions from the start.

After you are skilled enough, it becomes easier to stylize and create exaggerated proportions. In my opinion, it is more difficult to draw stylized figures than realistic ones, because there are so many design options to choose from. Making even one style choice at odds with the rest can make a drawing look disjointed and unappealing. For example, if you try to draw in the style of a caricature artist, it can be difficult to understand which areas of the body to exaggerate and how much to stylize them, especially if you don't understand basic anatomy.

The most common technique people use to measure the body is by head count (6 to 8 heads is used for an average body height). I think this method can be confusing since body and head size can vary, which makes it difficult to decide how many heads to use. Therefore, I prefer to simply divide the body in half—the top of the head to the bottom of the pelvis is equal to the bottom of pelvis to the bottom of feet. For the rest of the body measurements, I gained knowledge from practice by using many different figures and fixing my drawings each time I found an error.

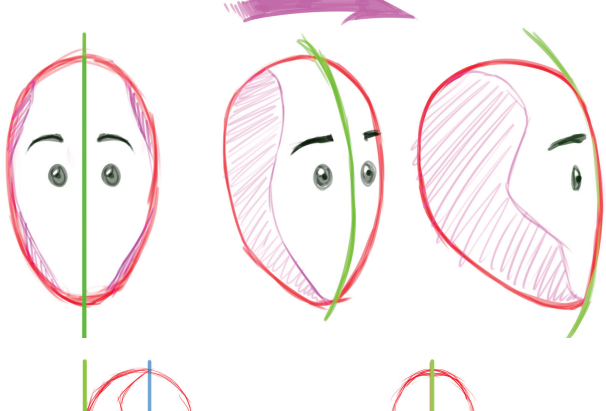


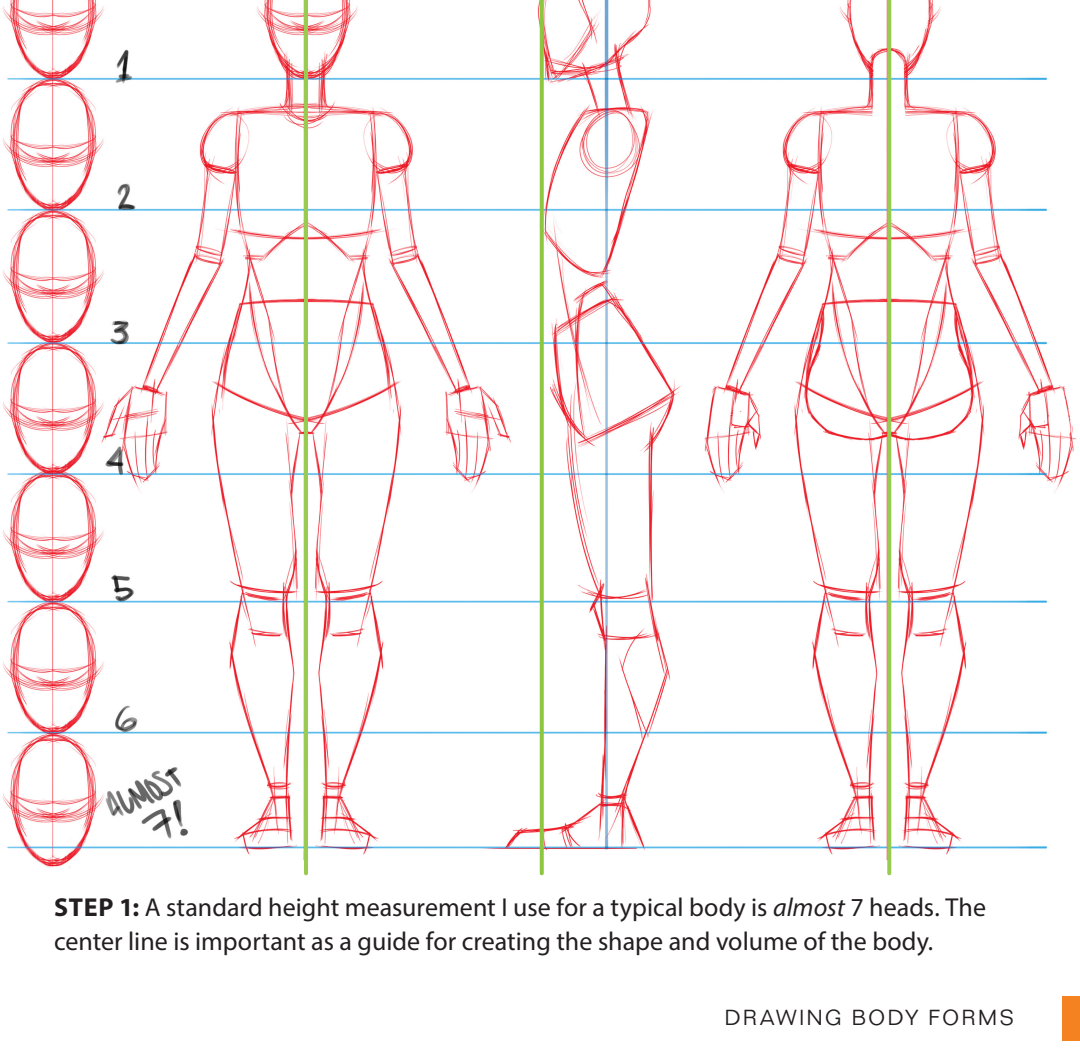
An easy body ratio is to divide in half. Top of the head to bottom of the pelvis is equal to the bottom of the pelvis to the feet.

THE TURNAROUND

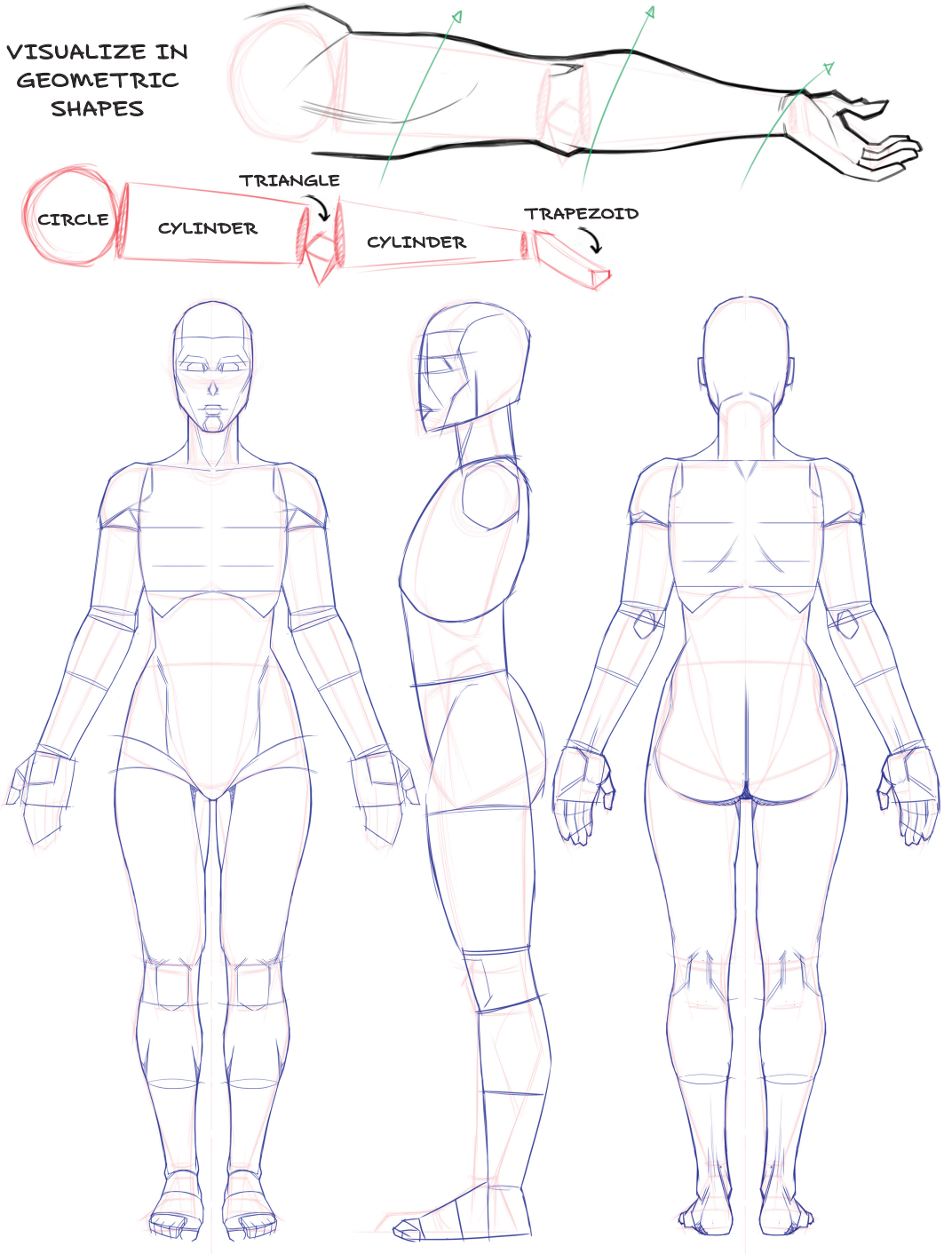
WITH RENÉ CÓRDOVA

The *turnaround* is a commonly used format and essential for artists presenting character designs for use in comics, video games, and animated films. Typically, a turnaround will include the front, back, and side poses and includes body measurements and design specifications.

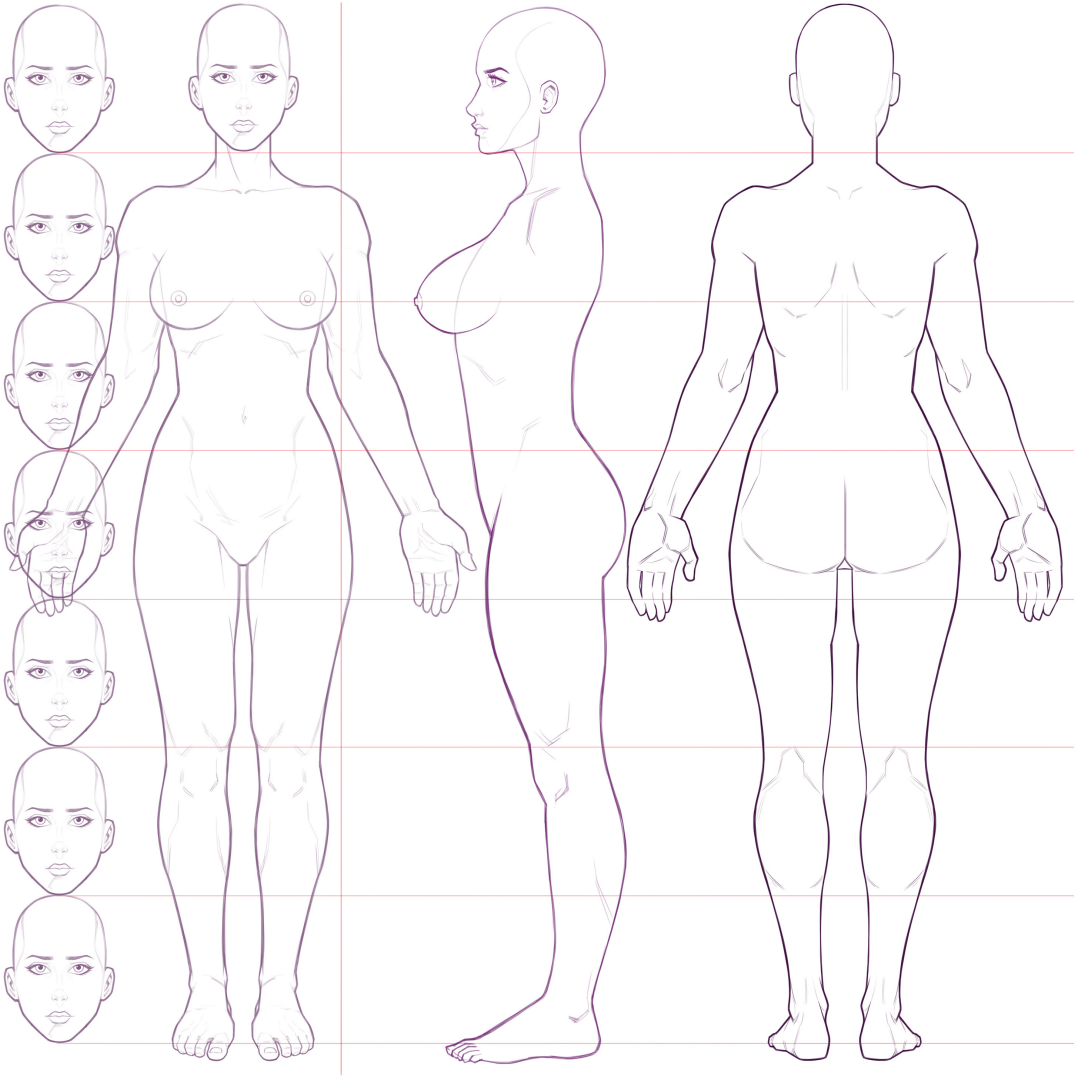




STEP 1: A standard height measurement I use for a typical body is *almost* 7 heads. The center line is important as a guide for creating the shape and volume of the body.



STEP 2: On a new layer above my red sketch lines, I draw in the volume of the body. I prefer to use angular lines, but the important point is to visualize each part of the body in geometric shapes. Note that none of the body parts are perfectly parallel to one another.



STEP 3: Now I am ready to create a clean outline of my design. The outer contour lines are drawn slightly thicker and I use thinner lines for inner details. I always work from visual references when drawing figures. Even when they are stylized, I pay attention to the muscles and joints. I think this helps my figures move correctly.

I hope this method is helpful to you as you learn anatomy and figure drawing. It is fascinating to see how different artists work. We all have our own methods, some may be more complicated, but in the end what really matters is that you do what works best for you.

EXERCISES DAY 7:

1. **Using visual references, draw at least two figures trying the method of dividing the body in half.**
2. **Next, utilizing the same references, draw at least two more figures using the turnaround method.**
3. **Review your results—which method do you prefer?**

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END OF SAMPLE

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