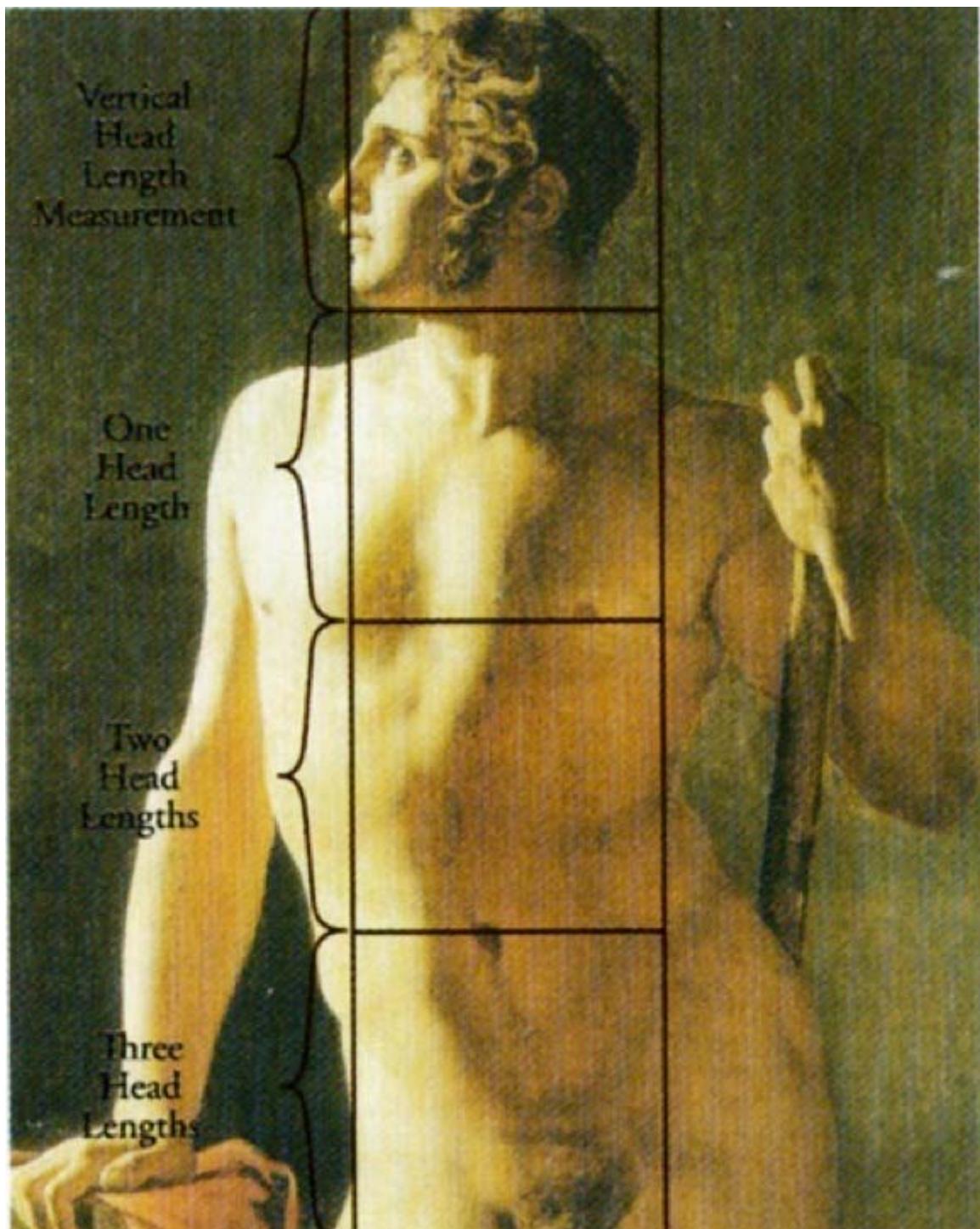




#### **HORIZONTAL AND VERTICAL**

The first example shows how horizontal and vertical measurements are helping line up and construct the head. Notice how from the viewpoint of the artist the bottom of the nose lined up with the bottom of the ear. The end of the eye that is going toward the back of the head lines up vertically with the pointed part of the shadow coming off of the jaw.



## DISTANCE

In this example you can see how distance measuring works. The distance from the chin to the naval is equal to two head lengths.



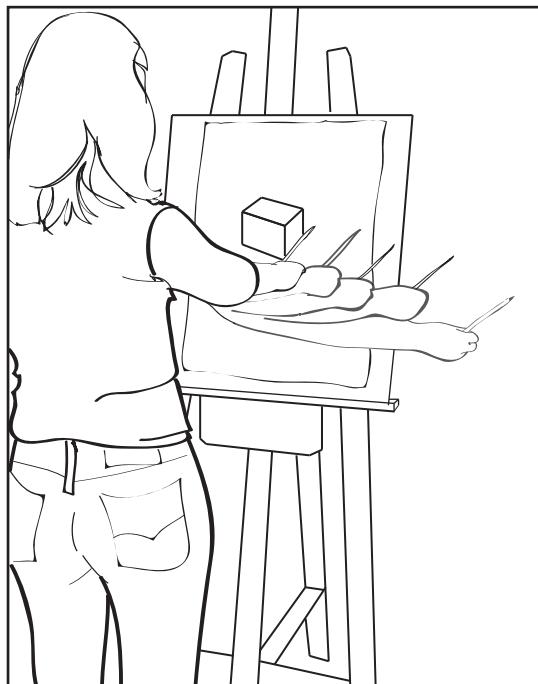
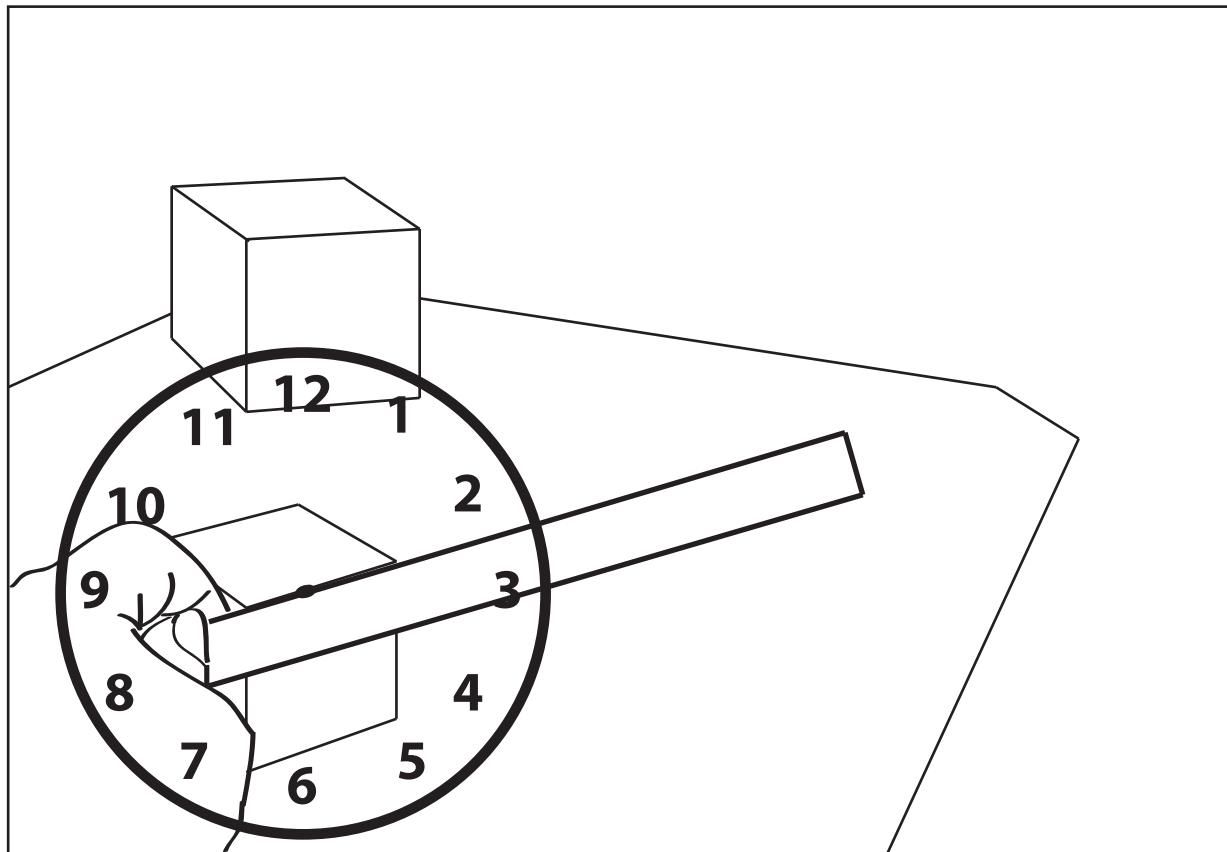
### ANGLES

Here is an example of a Leonardo Da Vinci drawing using the principle of angles measurements to line up the portrait. The area beneath the right eye, where the cheek bone is located lines up on an angle with the bottom tip of the nose, this is shown on the left side as well. The end of the mouth is found by finding its angle relationship with the spot on the brow ridge where the eye brow is at its highest point. Remember to begin your drawings with a gesture and don't try to rush to the finish. Take time to make sure you are measuring correctly.

## MEASURING (PROPORTIONS)

In order to achieve convincing proportions in your drawing you must measure areas of the subject being drawn. This means that you analyze the subject being drawn and transfer those studies to your drawing, making the needed corrections.

Example Below: **Angle Measuring** (also called clock angle measuring or diagonal measuring)



**Transferring  
the measurement  
to the paper**

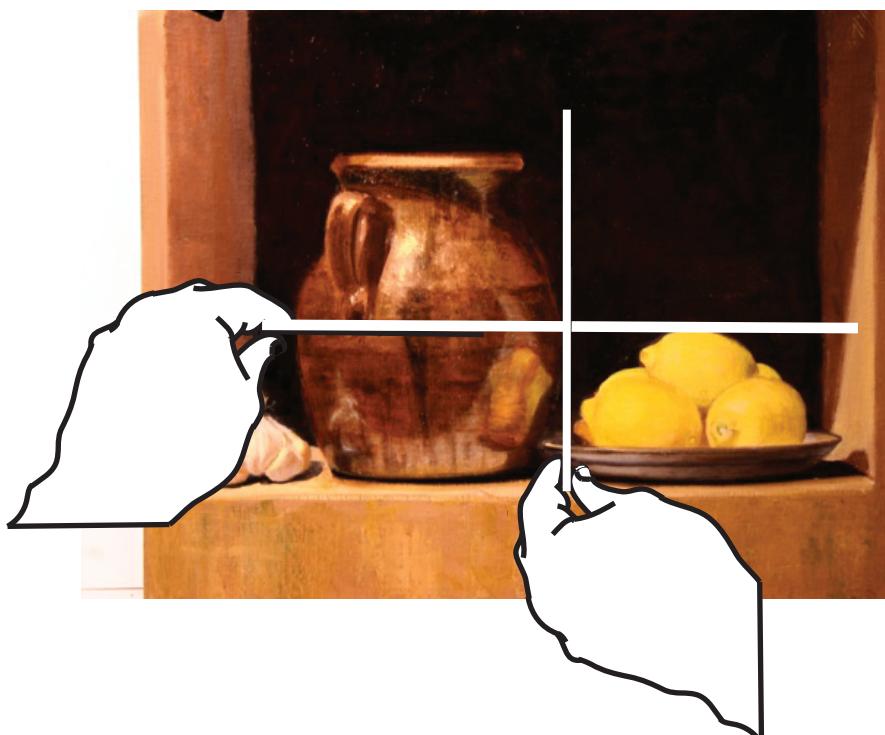
## SIZE AND DISTANCE

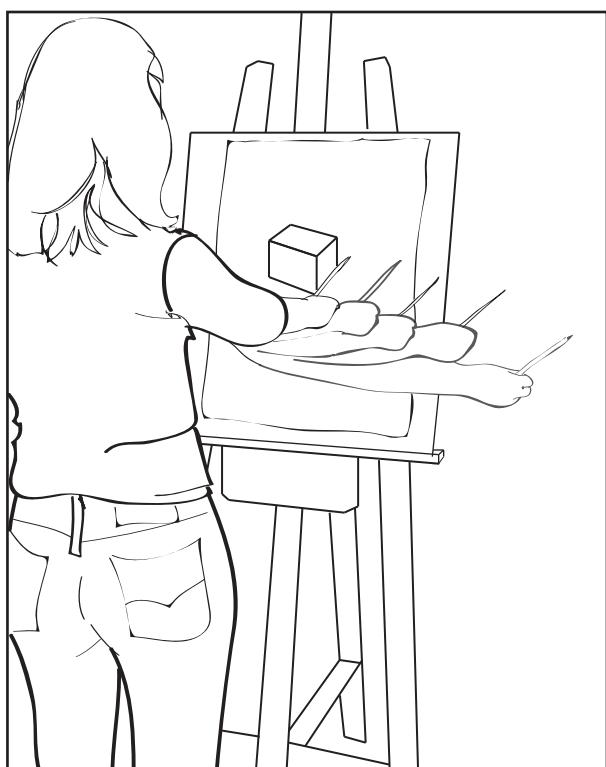


Distance measuring can help you find the correct proportions of the subject. The simplest way to think about distance measuring is to see how one the length or width of one area of an object compares with another area of the object .

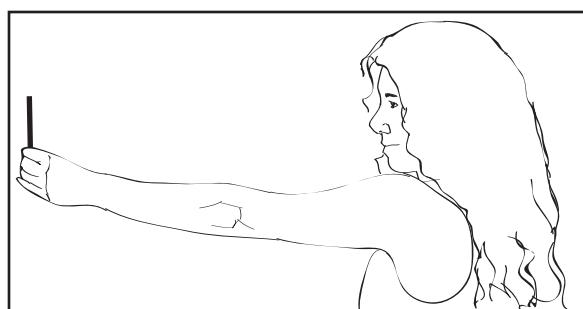
The example to the left shows that the distance from the base of the jug to the bottom of the spout is the same as the distance from the bottom of the spout to the top of the jug.

## HORIZONTAL AND VERTICAL ALIGNMENT





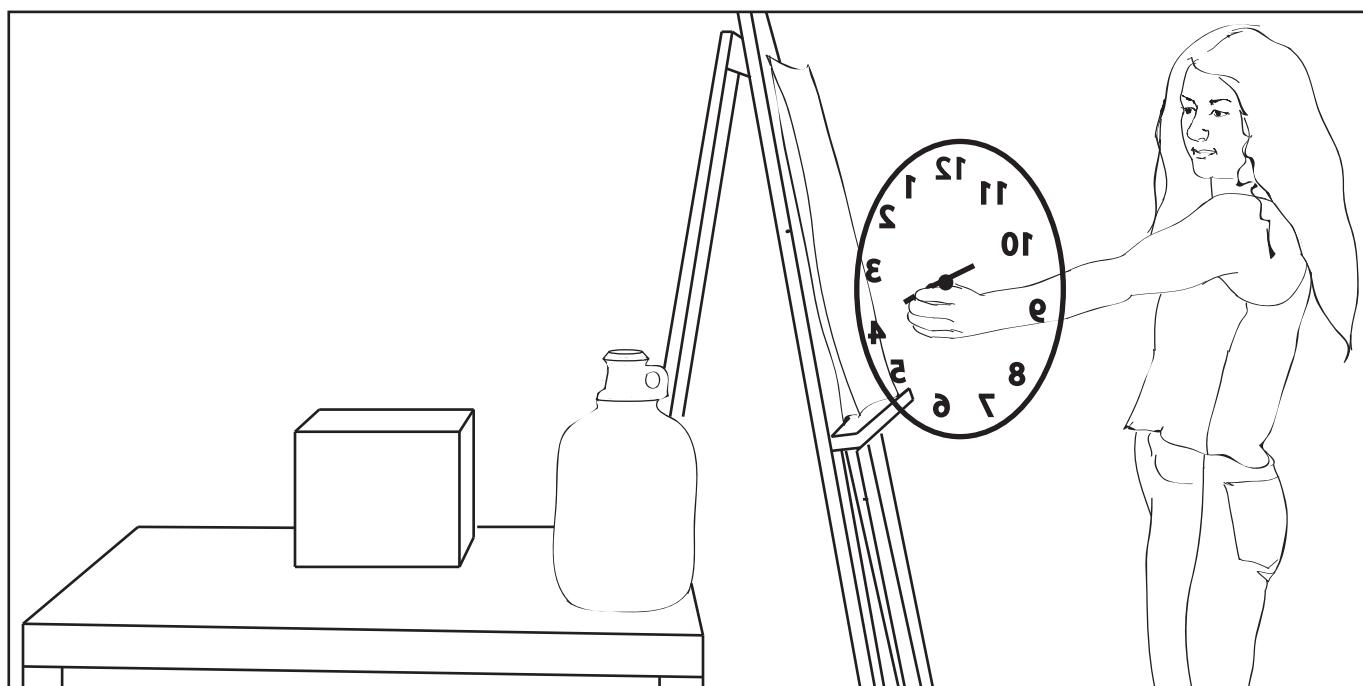
Remember to always keep your arm extended when transferring your measurements back to your drawing.



Always keep your arm extended when taking measurements.



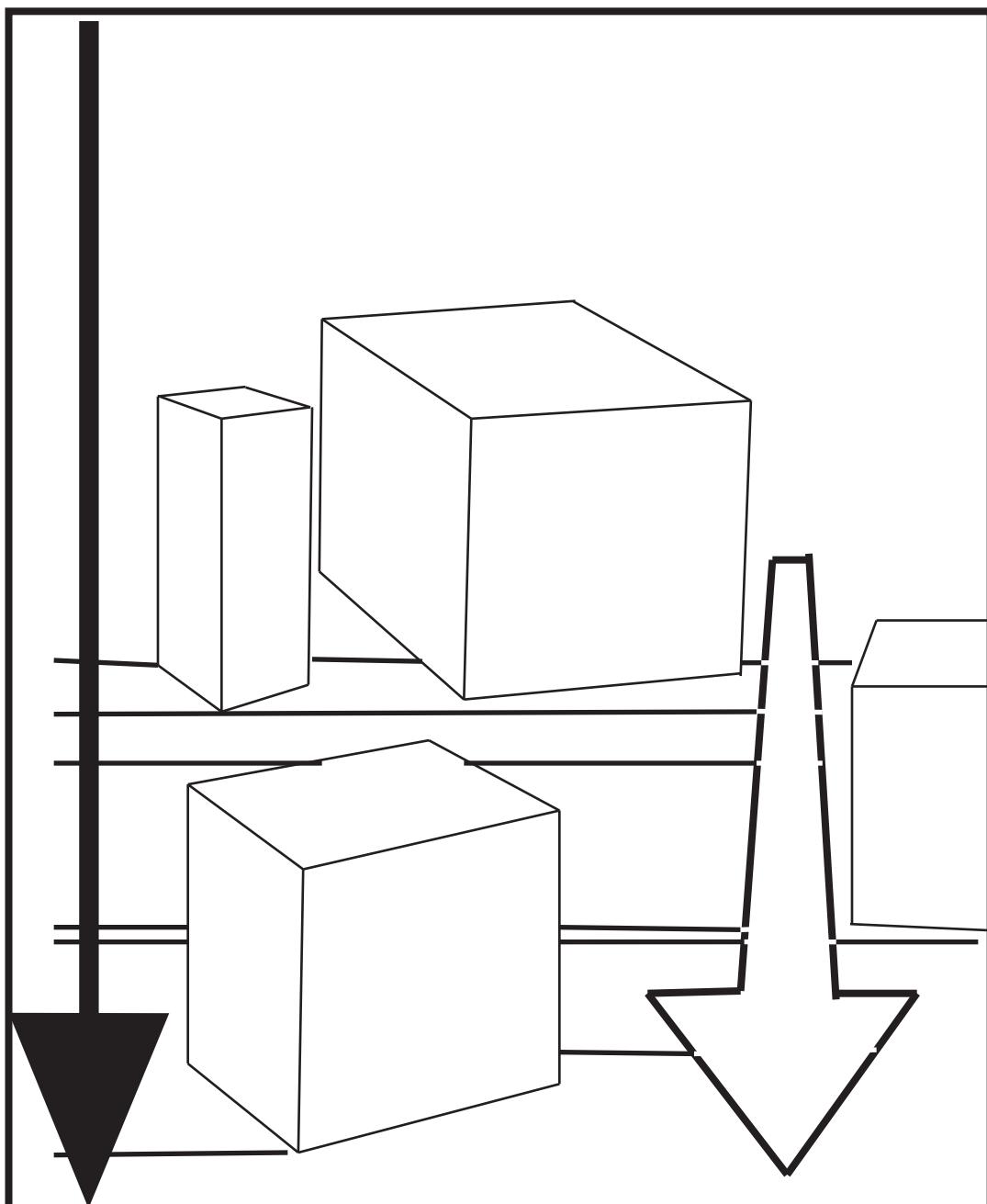
Bending your arm or tilting your hand when measuring can cause distortion and inaccuracy in your measurements.



Angle Measuring

# MEASURING

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Horizontal measurements can also be a tool for finding the correct relationship of objects to each other and the space.