

**Mimidolls.Com** Presents:

## General Techniques: Scale and Proportion

**Mimidolls.Com**  
for the serious cloth dollmaker

Presents:

**Mimi's Mannequins**  
**General Techniques**  
**Anatomy: Scale &**  
**Proportion**

by Gloria J. "Mimi" Winer  
**Mimidolls.Com**

**Mimi's**  
**Mannequins**

Male & Female Cloth Dolls

**4-Day Dollmaking Workshop**  
**Classroom on a DVD**

**Available June, 2012**



Tech  
niques

This is Victoria 4 and Michael 4. They are 3-dimensional models of the human body by DAZ Studios. They are displayed in the Poser 7 animation program.

When Mimi makes a doll with an extreme pose, I model it first in Poser. When she approves the model, I print out front, sides, and back views in the size that she uses for dolls.

Then she sculpts any necessary pieces in clay and drapes them to create the doll pattern. When the doll is sewn and stuffed, she adjusts the pattern for any corrections and makes a new doll.

When the finished dolls look like the sculpture, we have a new doll pattern.



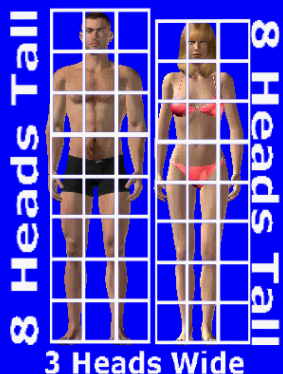
When Mimi makes a doll, she uses quarter scale, that is:  $\frac{1}{4}$  life-size or,

- $\frac{1}{4}$  inch on the doll = 1 inch on a real person, or
- 1 cm on the doll = 4 cm on a real person.

Scale determines the relationship of the doll to other figures and to props.

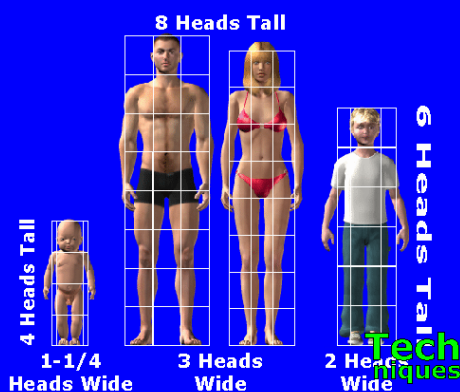
Quarter scale is convenient because:

- Many objects are available in quarter-scale size.
- Many fabrics and trims are available with quarter-scale patterns.
- Quarter-scale dolls are a convenient size for collectors. They don't take up too much space.
- Quarter scale dolls are the easiest to make. You don't need to be as precise about sewing as you must for smaller dolls, and stuffing takes less work than for larger dolls.



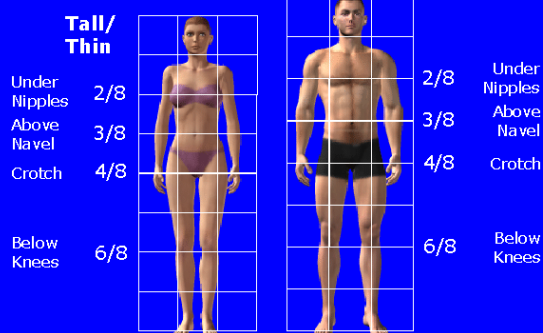
Proportion is the relationship between a figure and parts of itself.

Adult figures are 8 head-lengths tall and 3 head-widths wide.



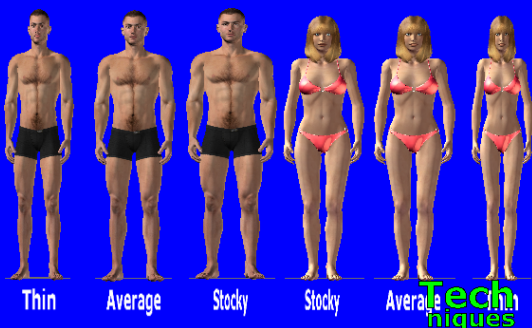
Proportion changes with age, but not with size. Babies, children, teens, adults, and matures have slightly different proportions. Unless the proportions match the apparent age of the figure, we find the doll jarring or unpleasant. You can make better dolls just by making sure the proportions match the age.

## 8 Heads by 2½ Heads



Most adults are 7-1/2 heads tall. That is, if you measure from the top of the head to the bottom of the chin, the total height of the figure is 7-1/2 times the height of the head. For artistic figures (such as dolls), we usually use 8 heads rather than 7-1/2. It makes things much easier and looks better than real life.

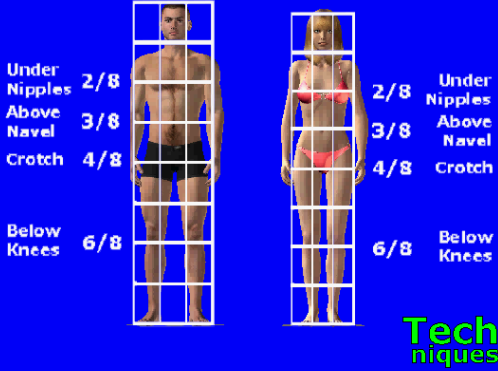
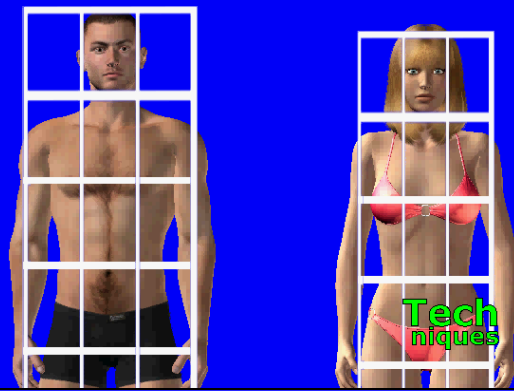
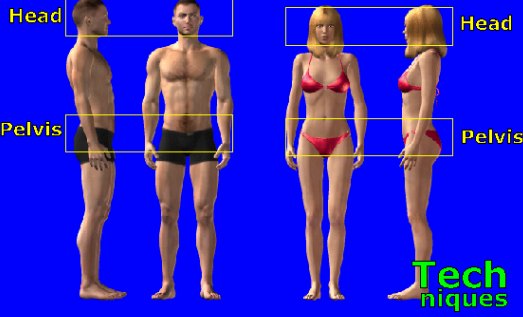
- A line drawn under the second head-length is just below the nipples.
- A line drawn under the third head-length is just above the navel.
- A line drawn under the fourth head-length is at the base of the genitals almost at the crotch.
- A line drawn under the sixth head-length is just below the knees.



Changing the size of the body does not change the relative sizes of body parts. Changing the body size allows for different physiques:

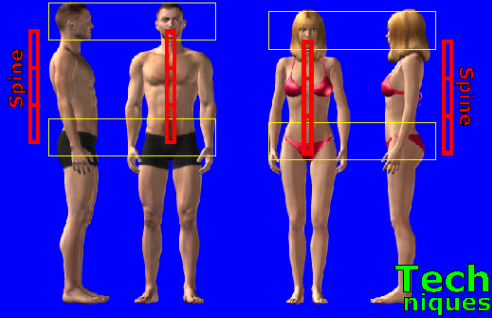
- Reducing a figure by the same amount in all directions, gives a smaller doll with the same proportions - an *Average* figure.
- Reducing a figure in height *only* gives a *Short/Stocky* figure.
- Reducing a figure in width *only* gives a *Tall/Thin* figure.
- Making the head larger with respect to the body gives a younger appearance. Babies have very large heads, but the face features are all squeezed into the lower third of the face.

Changes in size (at the same age) do not affect the proportion or relative size of the body parts to one another.

	<p>For artistic figures (such as dolls), we usually make the total height of the adult figure 8 heads tall. It makes things much easier and looks better than real life. Almost all fashion design is based on models that are 8 heads tall.</p> <ul style="list-style-type: none"> <li>• A line drawn under the second head-length is just below the nipples.</li> <li>• A line drawn under the third head-length is just above the navel.</li> <li>• A line drawn under the fourth head-length is at the base of the genitals almost at the crotch.</li> <li>• A line drawn under the sixth head-length is just below the knees.</li> </ul>
	<p>The head is usually narrower than it is tall. Most adults have a head that is about one third as wide as their shoulders.</p> <p>So adult doll figures are about 8 times as high as the head and 3 times as wide as the head.</p>
<p><b>Body Scale changes; Body Proportions does not</b></p> 	<p>Changing the size of a figure changes the body scale. It does not change the body proportions.</p> <p>The head remains the same height as the pelvis.</p>

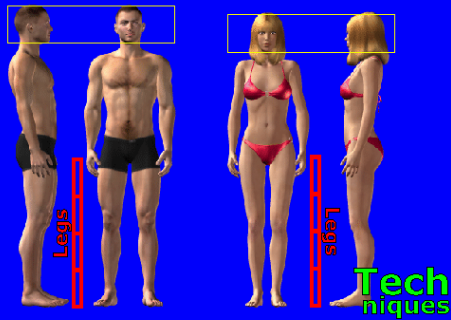


**Body Scale changes;  
Body Proportions does not**

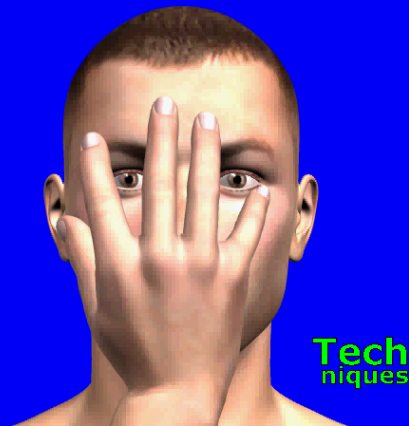


The spine remains the same relative length of 3 heads.

**Body Scale changes;  
Body Proportions does not**



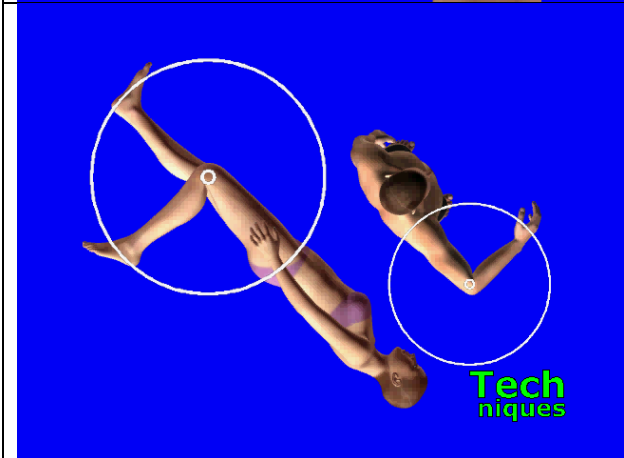
The legs remain the same relative length of 4 heads.



The hand extends from the chin to the middle of the forehead (where the third eye would be).

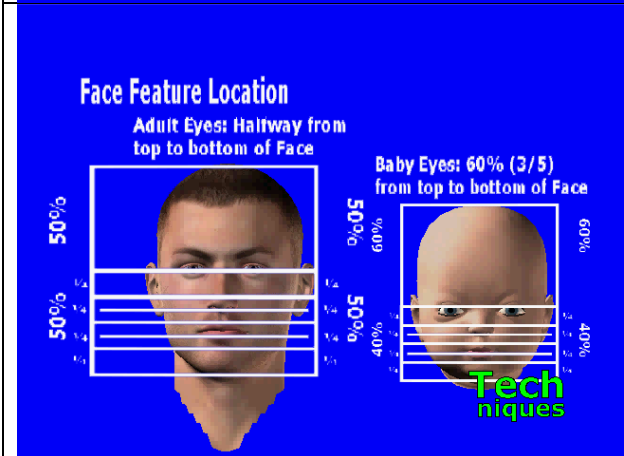


Similarly, the hand is the same length as the foot not including the toes.

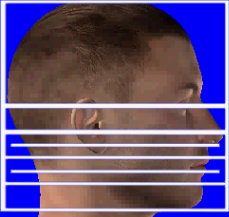

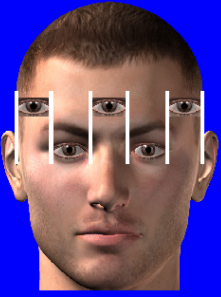



The distance from the shoulder to the elbow is the same as the distance from the elbow to the palm of the hand.

The distance from the hip to the knee is the same as the distance from the knee to the bottom of the heel.



The facial features also have proportional locations. For an adult, the eyes are exactly halfway down the head. In the drawing, the bottom of the head has been divided into fourths and eighths. The nose and mouth are located as shown in the drawings.

<p><b>Face Feature Location</b></p> <p>Adult Eyes: Halfway from top to bottom of Face</p>  <p>50% 50% 50% 50% 50%</p> <p>Baby Eyes: 60% (3/5) from top to bottom of Face</p>  <p>60% 40% 40% 40% 40%</p> <p>Tech niques</p>	<p>For younger people, the features are squeezed together in the lower part of the face.</p>
<p><b>Feature Location</b></p> <p>Eyes: An eye-length between and at sides</p>  <p>Tech niques</p>	<p>The size of the eyes is proportional to the width of the head. There is an eye-length between the eyes, and another eye-length at each side.</p>
<p><b>Scale:</b></p> <p>The relationship of the figure to other figures and to props.</p> <p>Tech niques</p>	<p>Scale determines the relationship of the figure to other figures and to objects.</p>

<p><b>Proportion:</b> The relationship of parts to the whole figure.</p> <p>Tech niques</p>	<p>Proportion determines the relationship of parts to the whole figure.</p>
 <p>Tech niques</p>	<p>Happy Dolling!</p>
<p><b>Mimi's Mannequins</b> Male &amp; Female Cloth Dolls <b>4-Day Dollmaking Workshop Classroom on a DVD</b> <b>Available June, 2012</b></p>	<p>Cancer and other circumstances have delayed the release of this video workshop until late 2014.</p>