

Barbie Doll Lab

Objective

Write and solve proportions to convert a Barbie Doll to Human Proportions.

Materials Needed

5 to 6 Barbie or Ken Dolls

5 to 6 Tape Measurers

Copies of Proportion Lab Worksheet

Lesson Summary

Before beginning students need to choose an average female height and, if using male dolls, an average male height. Students will use this predetermined average human height for their height ratios.

Divide students into groups with three or four students in each group. Each group will need one Barbie or Ken doll and one tape measure. Each student needs a copy of the proportion lab worksheet.

To begin, have students measure the height of the doll and create their height ratio, (doll to human height.) They will use this ratio throughout the lab as half of each proportion.

Next, the students will find all of the doll's measurements and complete the table on the front of the worksheet. They will then use these measurements and their height ratio to complete the back of the worksheet. As students write proportions for each measurement, they need to show both their proportion and work in the space provided. After they are finished, students need to answer the questions at the bottom of the page.

As students find the measurements of the human doll have them compare to themselves. For instance, Barbie's feet, in human-size, are approximately four inches long. Students will appreciate this more if they measure four inches along their feet to emphasize how tiny this amount is.

Barbie Proportions Lab

In this lab, we are going to convert a Barbie or Ken doll to human proportions. You will be given one doll and a measuring tape. Use the tape to find the needed measurements to complete the table below. Then use proportions to convert these measurements to human standards. Show all work.

Barbie's Desired Human Height: 67 inches

Ken's Desired Human Height: 74 inches

Data Table: Use the given measuring tape and doll to complete the appropriate table. Write all measurements in inches.

	Barbie Doll Measurements
Height	
Arm Length	
Foot Length	
Leg Length	
Waist	
Hips	
Bust	
Other	
Other	

	Ken Doll Measurements
Height	
Arm Length	
Foot Length	
Leg Length	
Waist	
Hips	
Bust	
Other	
Other	

Using each measurement on the front, write a proportion to convert the doll measurement into human dimensions.

	Proportion Set-up & Scratch Work	Human Barbie/Ken (in.)
Height		
Arm Length		
Foot Length		
Leg Length		
Waist		
Hips/Shoulder		
Bust/Chest		
Other		
Other		

Answer the following questions in complete sentences.

1. We used 67 inches for Barbie’s human height and 74 inches for Ken’s height. What does this mean? What do these numbers represent?
2. Explain how we were able to use proportions to find a “Human-Size” Barbie or Ken.
3. What did you like or dislike about this activity? List at least three things.