Testing the Vitruvian Man
Vitruvian.tns

Name _____

Class _____

Step 1 – Collecting the data

Each student will measure his or her height and wingspan. Your teacher has instructions for you as to how you will collect and record the data.

Step 2 – Creating a scatter plot

After collecting data, it is always important to display the data graphically. Because there are two variables involved, create a scatter plot.

- Which is the independent variable? Why?

At the bottom of page 1.5, click on **Click to add variable**, and choose the independent variable. Then move to the left side, click on **Click to add variable**, and choose the dependent variable.

- Does the data appear to follow a pattern? If so, what is the pattern?

- Describe the relationship between the two variables using the vocabulary you have learned. Discuss the type of association and strength of the relationship.

Step 3 – Drawing the line of best fit

If the data appears to have a pattern, we can describe the pattern using a mathematical model. In this case, the model would be linear.

Let's try to find the line that would have the "best fit." Add a movable line to your scatter plot. To do this, choose **MENU > Analyze > Add Movable Line**.

- What properties should this line have?

Make the line a "best fit" by moving it until it meets the properties you have listed.

Change the *y*-intercept. In the middle of the line, your cursor will be perpendicular lines (✛). **Change the slope.** At the ends of the line, your cursor will be round arrows(↻). Press ⓒtrl + 🖱 when either appear and then use the TouchPad to move the line.

- Describe your line of best fit. Does it meet the properties that were listed above?