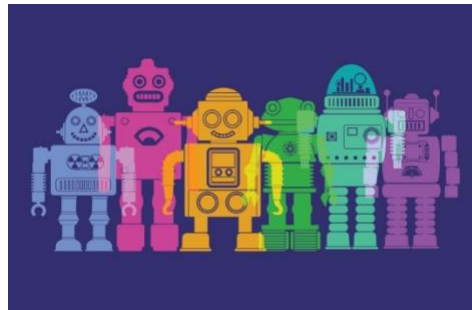


Inquiry Question

How is my body like a mathematical machine?

Name: _____ **Date:** _____



General Instructions

1. Measure your height and wingspan:



- Take off your shoes and stand up straight.
- Ask your helper to measure your height and record this in the Height column of Table 1
- Hold your arms straight out as shown in the picture.
- Ask your helper to measure the distance from the tip of the middle finger on one hand to the tip of the middle finger on the other hand.
- Record this in the Wingspan column of Table 1

2. Measure your arm:

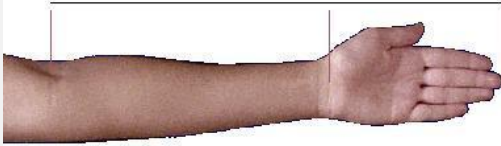


Diagram 2

- Hold your arm straight out as shown in the diagram
- Ask your helper to measure the distance from the elbow to tip of the middle finger
- Record this in the Arm length column of Table 2
- Ask your helper to measure your forearm from the elbow to the wrist. Record this in the Forearm column of Table 2

3. Repeat these with measurements with your 10 volunteers

Analysis

Your analysis will be completed in Table 3.

1. Calculate your height to wingspan ratio to 3 decimal places. Show your work in the Workspace below Table 3. Record this value in the "Height to Wingspan" column in Table 3. You only need to show the work for your data as a sample calculation.
2. Similarly calculate the arm to forearm ratio to 3 decimal places and enter this value in the "Arm to Forearm ratio" column in Table 3
3. Determine your Height to Arm ratio to 3 decimal places. Show your work in the space provided and record the value to "Height to Arm Ratio" column in Table 3.

Materials you'll need:

- flexible metric measuring tape (preferable a fabric tape like those used by seamstress)
- a helper to measure.
- 5-10 volunteers for data collections (preferably around your age group)

Project submission:

Your project submission includes the

- Completed data table
- Analysis section of the worksheet.
- Completed questions in the worksheet

NOTE: SAVE YOUR WORKSHEET. YOU WILL NEED IT AGAIN IN THE NEXT UNIT

	Arm Length (cm)	Forearm length (cm)
Me		

Analysis

Table 3: Analysis Table

	Height to Wingspan Ratio	Arm to Forearm Ratio	Height to Arm Ratio
Me			

Sample Workspace

Height to Wingspan Ratio	Forearm to Arm Ratio	Height to Arm Ratio

Analysis and Questions

1. Examine your analysis table. Explain whether you and your volunteers are mathematically similar to each other?

