FLINN SCIENTIFIC

Name_____

Create a Mobile Worksheet

Data and Observations

Part A.

A1 Diagram

A2 Diagram

A3 Diagram

Part A Post-Lab Questions

1. Observe diagrams A2 and A3.

   a. What general observation can be made regarding the washers and their respective distances to the fulcrum when the lever is balanced?

   b. Underline the correct answer in the following sentence. "If the load on one side of a lever is greater than the load on the other side, then the distance from the heavier load to the fulcrum must be (less than, greater than, equal to) the distance from the fulcrum to the lighter load."

2. Assume the washers all weigh the same.

   a. How does the weight of the two-washer load compare to the weight of one washer?

   b. How does the distance from the fulcrum to the two-washer load compare to the distance from the fulcrum to the single washer?

   c. How does the distance from the fulcrum to the three-washer load compare to the distance from the fulcrum to the single washer?

3. Let W_1 = the weight of the load on one side of a lever and X = the distance from the fulcrum to the load on that same side. Let W_2 = the weight of the load on the opposite side of a lever and Y = the distance from the fulcrum to W_2.

   Which of the following represents the relationship between the weight and distance to the fulcrum on one side of a lever to the weight and distance on the other side?

   a. $W_1 + X = W_2 + Y$

   b. $W_1 \times X = W_2 \times Y$

   c. $W_1 / X = W_2 / Y$

B1. Data Table

Tier	Object Description	Object Mass (g)
1		
2		
3		

B2. Data Table

Tier	Total Mass (g)
1	
1 & 2	

B3.

Tier 1 Calculation:

Tier 2 Calculation:

Tier 3 Calculation:

B3. Data Table

	Calculated X (cm)	Calculated Y (cm)	Measured X (cm)	Measured Y (cm)
Tier 1				
Tier 2				
Tier 3				

Part B. Post-Lab Questions

4. Compare the calculated distances and the measured distances in Data Table B3.

   a. Do the calculated distances and the measured distances match?

   b. Give some possible sources of error that might account for any differences.

5. Did the constructed mobile confirm the statement from Question 1b in Part A?