

Name: _____

Fill out the following tables based on the measurements described below. Write the measurements in decimal form, rounded to the nearest 10th of a cm. Round the ratios to the nearest 100th.

T1 – length of a side of your cardboard (paper) triangle.

T2 – Length of the matching side of its shadow in the tape.

L1- Distance from your light to the vertex of cardboard triangle.

L2 – Distance from the light to the matching shadow vertex.

Trial 1 — Side Lengths

	T1 (original)	T2 (shadow)	T2 / T1
Side 1	_____ cm	_____ cm	_____
Side 2	_____ cm	_____ cm	_____
Side 3	_____ cm	_____ cm	_____

Trial 1 — Vertex Distances

	L1 (light to triangle)	L2 (light to shadow)	L2 / L1
Vertex 1	_____ cm	_____ cm	_____
Vertex 2	_____ cm	_____ cm	_____
Vertex 3	_____ cm	_____ cm	_____

Trial 2 — Vertex Distances (different heights, same shadow)

	L1 (light to triangle)	L2 (light to shadow)	L2 / L1
Vertex 1	_____ cm	_____ cm	_____
Vertex 2	_____ cm	_____ cm	_____
Vertex 3	_____ cm	_____ cm	_____

Trial 3 — Vertex Distances (light at an angle, triangle still parallel to floor)

	L1 (light to triangle)	L2 (light to shadow)	L2 / L1
Vertex 1	_____ cm	_____ cm	_____
Vertex 2	_____ cm	_____ cm	_____
Vertex 3	_____ cm	_____ cm	_____

What stayed the same?

What changed?

Why do you think this happened?

Do you think you can create the same shadow using a different shape triangle?

Try it with the equilateral triangle, did it work?

Does that mean your triangle and the equilateral triangle are just different sizes of the same shape?