

Name: _____

Date: _____

Shrinky Dink® Fun!

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BACKGROUND: You are probably familiar with Shrinky Dinks—a craft project that involves producing a design on a plastic sheet and heating it. During the heating process, the plastic shrinks, producing a reduced (but roughly proportional) version of the original designs.

INSTRUCTIONS:

1. Use a pencil and lightly outline your drawing on your Shrinky Dink® paper. Before you begin your drawing, be certain of what you want to draw, as the paper is somewhat expensive. Tracing a picture out of a magazine or book, or finding something online to trace is a great idea. Do not pick any picture or design that is long and skinny, for such designs will curl when they are heated. Avoid a shape that is a simple square or rectangle as that would be boring. Use a hole-punch to make a hole that you can use to hang your design on the bulletin board.
2. Use colored pencils or permanent markers to color your picture.
3. Cut your design out carefully.
4. With a **metric** ruler, measure the width of your cutout at its **widest** point and its height at its **tallest** point. Record your measurements here:

Original **width**: _____ cm.

Original **height**: _____ cm.

5. Use graph paper to approximate the area of your cutout in square units. Each square on the graph paper equals 1 square unit. By tracing your cutout onto graph paper, you should be able to estimate the approximate area of your cutout. Attach the graph paper to this handout and show how you calculated the area of your design.

My cutout is approximately _____ graph paper square units.

6. Turn in your cutout to me. I will bake it for you!

7. When you get your cutout back, measure the width of your cutout at its **widest** point and its height at its **tallest** point. Record your measurements here:

New **width**: _____ cm.

New **height**: _____ cm.

8. Compare your measurements in #7 to the measurements that you took in #4. How do they compare? What is the ratio of the old height to the new height? What is the ratio of the old width to the new width?

$$\frac{\text{Old width}}{\text{New width}} =$$

$$\frac{\text{Old height}}{\text{New height}} =$$

9. Use graph paper to approximate the area of your Shrinky Dink. Sketch the design next to the original and show the method you use to calculate the new area.

My Shrinky Dink is approximately _____ graph paper square units.

10. Compare your second area measurement to your measurement in #5. How do they compare? What is the ratio of the old area to the new area?

$$\frac{\text{Old area}}{\text{New area}} =$$

11. Are your ratios in #8 and #10 the same? Are they different? How **should** they relate? If things didn't work out perfectly, why didn't they work out perfectly?

12. Your Shrinky Dink is much thicker now that it has been baked. How much thicker do you think it is? Explain your reasoning.