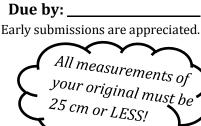
Name:	

Part 1: Collect Information About the ORIGINAL

The shape of my original is (choose one):

- □ rectangular prism not a cube (6 rectangular faces)
- □ cylinder (2 circular bases, 1 rectangular face)
- □ triangular prism (2 triangular bases, 3 rectangular faces)
- □ other/combo (you must get approval for this) *approved by*:___

Points Points **Requirements – Complete A, B and C on graph paper** Possible Earned Sketch a 3-dimentional drawing of the original. Neatness counts. A. 4 Proportionality counts. Label all dimensions in CENTIMETERS. Draw each face separately using the original measurements. Neatness B. 5 counts. Proportionality counts. Label all dimensions in CENTIMETERS. Add the artwork for the front face, in its **original** size, to part B. Draw the letters and artwork as accurately as possible using a ruler to measure each C. 6 shape, letter, etc. Match colors as closely as possible. *NOTE: Absolutely no photocopying is allowed!* Calculate the volume and surface area of the original. Show all work and label your answers with the correct units. VOLUME SURFACE AREA D. 8 Pair Check: Have a classmate or parent check your work and calculations to make sure Part 1 is complete and accurate. The person who checks your work must write one **constructive comment** and sign below. Make sure to fix your work if necessary. Check and sign: □ "I have checked these drawings and calculations for accuracy." G. 2 **<u>Constructive</u>** comment/suggestion for improvement: Print name:______ Sign:______ **TOTAL: 25 points possible**



The scale factor for my project is (circle one):

Name:	

Part 2: Collect Information About the MODEL

DEL		Due by:					
			Early submissions are appreciated.				
5	4	3	2	1	1	1	
5	1	5	2	2	3	4	

	Points Possible	Requirements – Complete B and C on graph paper			
	List the original measurements and new measurements for the scale factor model. (<i>Prism</i> – Length, Width, Height; <i>Cylinder</i> – Radius, Height)				
А.	4	ORIGINAL NEW MODEL			
B.	5	Draw each face separately using the model measurements. Neatness counts. Proportionality counts. Label all dimensions in CENTIMETERS.			
C.	8	Design the artwork for the front face, in its new model size. Draw the letters and artwork as accurately as possible using a ruler to measure each shape, letter, etc. Fine details not necessary. Color not necessary. *NOTE: Absolutely no photocopying is allowed!*			
D.	4	Calculate the volume and surface area of the model <u>using the new</u> <u>measurements AND volume and surface area formulas.</u> Show all work and label your answers with the correct units. VOLUME SURFACE AREA			
E.	4	Calculate the volume and surface area of the model using the scale factor equations. Show all work and label your answers with the correct units. VOLUME SURFACE AREA			
TOTAL: 25 points possible					

NT			
- 131	аm	Δ	
1.4	am	c	•

Part 3: Make the Scale Factor Model

Due by: _____

Early submissions are appreciated.

	Points Possible	Requirements	Points Earned
A.	6	Scale Factor model is constructed with correct dimensions .	
B.	10	Front face is <u>complete</u> . All artwork and lettering is present. Artwork and lettering on front face is <u>original</u> and drawn <u>to scale</u> . Neatness counts! *NOTE: Absolutely no photocopying is allowed!*	
C.	3	 2nd Face is complete. Artwork and lettering on 2nd face is <u>original</u> and drawn <u>to scale</u>. Neatness counts! *NOTE: Absolutely no photocopying is allowed!* 	
D.	3	3rd Face is complete. Artwork and lettering on 3 rd face is <u>original</u> and drawn <u>to scale</u> . Neatness counts! *NOTE: Absolutely no photocopying is allowed!*	
E.	3	Colors are matched well.	
F.	5	Overall Effort	
G.	up to 5 points	Extra Credit opportunities for functionality, completing fine print, more details in addition to the three required faces, etc.	
		TOTAL: 30 points possible	

Comments:

Name:_____

Part 4: Project Presentation

Be prepared to present on:

	Points Possible	Requirements	Points Earned
А.	2	Non-verbal Skills – poise, eye-contact, etc. Use the model as a visual aid. Look at the audience, not at the teacher!	
B.	2	Verbal Skills – speak slowly; use a clear voice with appropriate volume and enthusiasm.	
C.	4	Explanation of Scale Factor Growth – Clearly present the major concept of how scale factor affects 1-dimensional, 2-dimensional, and 3-dimensional growth. How did you find the new lengths, areas, and volume for your model?	
D.	1	How many of your originals would fit inside of your model?	
E.	6	Two Fun Facts – Fun facts are creative, accurate, and thoroughly explained (show how you calculated the fact). Fun Facts are written on a 3x5 index card and presented under the doc-cam during presentation. <i>Some sample Fun Fact questions to ask & answer are listed below.</i>	
F.	5	Overall Effort	
		TOTAL: 20 points possible	

Comments:

<u>Fun Fact Ideas:</u>

The bar of soap in the original box took ____ days to dissolve. The scale factor 4 version of the soap would take____ days to dissolve.

The original can of soda has ____ calories. The SF 3 version would have ____ calories. This is enough energy to run for ____ minutes.

If a SF 4 human was holding this scale factor 4 pack of gum, they would be _____ feet tall. That's as tall as _____!