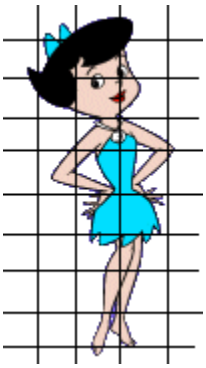
Cartoon Enlargement Project

Instructions:

In this activity we will start with a small cartoon and "blow it up" or make an enlargement using scale factor.

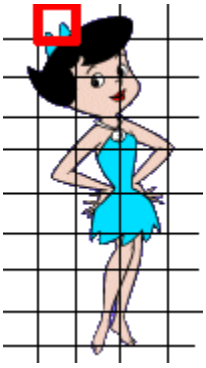
1. Draw a 1cm by 1cm square grid over your cartoon picture. Use a pencil.

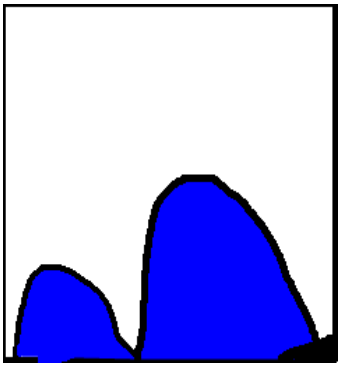


You may need to cut the border around your picture so it fits into the grid evenly. The drawing to the left is only an example, your grid must contain 1cm by 1cm squares. After completing the grid, fill in the area and perimeter of your cartoon in the provided space on the back of this page.

2. Now you must choose a scale factor. The larger the scale factor, the larger your cartoon will become. Scale factors must be at least 5cm. Then, using a pencil and your scale factor, lightly draw a new enlarged grid on your large sheet of white paper. You will need to erase these lines once the cartoon has been transferred to the new grid. So for example, if you choose a scale factor of 8, you will draw an enlarged grid identical to the grid on your cartoon, composed of 8cm by 8cm squares. After completing the grid fill in the area and perimeter of your cartoon in the provided space on the back of this page.

3. At this point, you are ready to DRAW. Remember, you do NOT have to be an artist to produce an impressive enlargement. All you do is draw EXACTLY what you see in each small square into its corresponding large square. For example, in the second square on the top row of the "Betty" enlargement we see the tips of her bows and a tiny bit of her hair. These get drawn on the big grid as shown below.





4. When you have completed transferring the cartoon, staple the original cartoon in the bottom left hand corner of your enlargement. Erase the grid lines then color the enlargement neatly using colored pencils or crayons. Complete the table under the Analyzing Data section to show all the different ways scale factor can be expressed for your drawing. You will be graded according to the grading rubric located on the back of this page. The rubric must be turned in with your finished product. HAVE FUN!

Name(s)_____

Analyzing the data:

Original Figure:

Perimeter: _____ Area:_____

New Figure:

Perimeter: _____ Area:_____

Scale Factor Table	Fraction(Ratio)	Decimal	Percent
Original to New (Enlargement)			
New to Original (Reduction)			

The original figure and new figure are _____ figures!

Grading Rubric

Requirements	10 points	7 points	5 points	Points earned
A 1cm by 1cm grid is drawn over the original figure.	The grid has accurate measurements, and was made using a straightedge.	The grid has somewhat accurate lines; some may be slightly crooked or sloppy.	Grid is not 1cm by 1cm; lines are sloppy and crooked.	
Enlarged grid is drawn following the chosen scale factor.	The grid has accurate measurements, and was made using a straightedge.	The grid has somewhat accurate lines; some may be slightly crooked or sloppy.	Grid does not follow scale factor; lines are sloppy and crooked.	
Cartoon transferred to the new grid	Cartoon is transferred accurately to the new grid following the guidelines.	Cartoon is transferred somewhat accurately. Some parts may be disproportioned	Cartoon is disproportionate. The new figure does not resemble the original.	
Drawing is colored.	Cartoon enlargement is colored neatly using colored pencils or crayons.	Cartoon enlargement is colored using colored pencils or crayons.	Cartoon enlargement is partially or not colored. Is colored with markers.	
Analyzing the data	The questions are answered completely with 100% accuracy	The questions are answered with at least 75% accuracy.	The questions are partially answered or answered with less than 50% accuracy.	
Overall Look	The overall look is excellent! The new figure appears almost identical to the original. Color greatly enhances the figure,	The overall look is good Some sections appear to be disproportioned. Color enhances the picture.	The overall look is fair. Many sections appear disproportioned. Color adds little to the overall look.	

Total Points: _____
60

Grade: _____ %