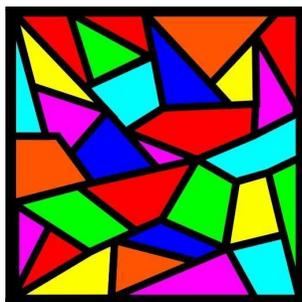


Name _____

Date _____



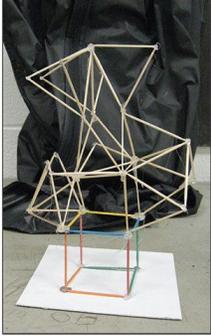
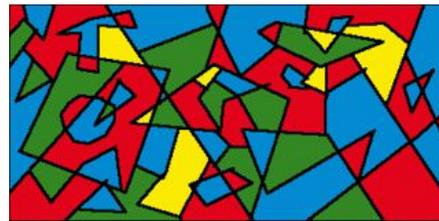
One of the most beautiful applications of geometry can be found in the skilled art of stained-glass-window design. From the inspiring medieval creations such as the Rose Window in the Cathedral of Notre Dame to the magnificent adornments of Frank Lloyd Wright's modern architecture, stained glass has been used to lift the human spirit.

Your task is to make a possible stained-glass-window design using the following: geometric shapes, angles and lines. Below is a list of the components for your design. You will be defining each term.

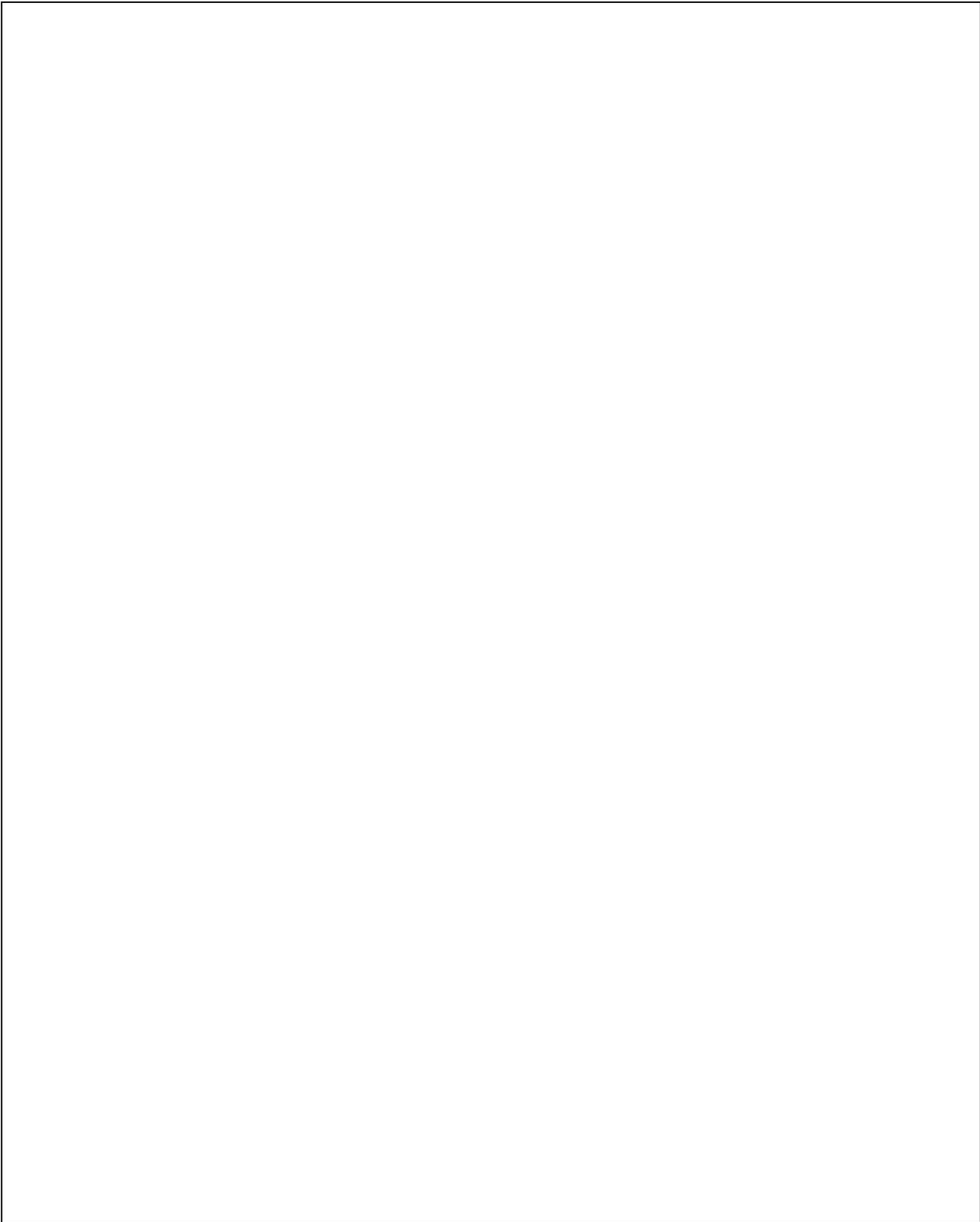
Geometry Terms:

Angles	Lines	Triangles	Quadrilaterals	Polygons
1) Acute angle	10) Parallel lines	13) Acute triangle	19) Square	24) Pentagon
2) Obtuse angle	11) Perpendicular lines	14) Obtuse triangle	20) Rectangle	25) Hexagon
3) Right angle	12) Transversal	15) Right triangle	21) Parallelogram	26) Heptagon
4) Straight angle		16) Equilateral triangle	22) Rhombus	27) Octagon
5) Complementary angles		17) Isosceles triangle	23) Trapezoid	28) Nonagon
6) Supplementary angles		18) Scalene triangle		29) Decagon
7) Vertical angles				30) Dodecagon
8) Adjacent angles				
9) Corresponding angles				

Your Assignment: Complete a drawing using 24 different terms from the above list, with at least 3 from each category, as the features in your art. You may use paper and colored pencils/pens/markers/crayons, or Google Drawing, or alternative materials (with teacher approval).

Exceeds the standard	Meets the standard	Approaching
<p>All 24 features are included using alternative materials (final draft not on paper), Ex: sidewalk chalk:</p>  <p>Or sculpture (colors not needed):</p> 	<p>Contains the 24 required features</p>	<p>Contains at least 12 of the required features</p>
<p>n/a</p>	<p>All features included are represented accurately and labeled in the first draft</p>	<p>At least 12 features are accurate and labelled</p>
<p>n/a</p>	<p>A straight edge has been used throughout</p>	
<p>Coloring follows the rules for 4-color mapping (only 4 colors allowed, no adjacent figures can be the same color). For example:</p> 	<p>Coloring is neat and eye catching (no white spaces, does not look rushed, attention to detail is clear)</p>	
<p>n/a</p>	<p>Borders of figures are clearly indicated (e.g. with bold dark color)</p>	

First Draft

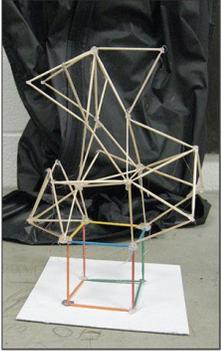


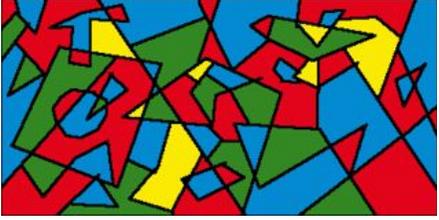
Name _____

Date _____

Before you turn in your stained-glass design, make sure you have the following:

- A list of definitions
- 1 copy with colored and lines drawn over with back pen/fine point marker
- 1 copy labeled with your geometric features
- Rubric filled out/highlighted based on your assessment of your work

Exceeds the standard	Meets the standard	Approaching the standard
<p>All 24 features are included in an alternative format (not on paper), for example, sidewalk chalk:</p>  <p>Or sculpture (colors not needed):</p> 	<p>Contains the 24 required features</p>	<p>Contains at least 12 of the required features</p>
<p>n/a</p>	<p>All features included are represented accurately and labeled in the first draft</p>	<p>At least 12 features are accurate and labelled</p>
<p>n/a</p>	<p>A straight edge has been used throughout</p>	
<p>Coloring follows the rules for 4-color mapping (only 4 colors allowed, no adjacent figures can be the same color). For example:</p>	<p>Coloring is neat and eye catching (no white spaces, does not look rushed, attention to detail is clear)</p>	

		
n/a	Borders of figures are clearly indicated (e.g. with bold dark color)	

Strength	
Area of improvement	

Check off or highlight the items that are included in your stained-glass design
***If you have a feature is not included on the table, write it in under the appropriate column.**

Geometry Terms:

Angles	Lines	Triangles	Quadrilaterals	Polygons
Acute angle	Parallel lines	Acute triangle	Square	Pentagon
Obtuse angle	Perpendicular lines	Obtuse triangle	Rectangle	Hexagon
Right angle	Transversal	Right triangle	Parallelogram	Heptagon
Straight angle		Equilateral triangle	Rhombus	Octagon
Complementary angles		Isosceles triangle	Trapezoid	Nonagon
Supplementary angles		Scalene triangle		Decagon
Vertical angles				Dodecagon

Adjacent angles				
Corresponding angles				

Definitions and formulas Choose at least 3 from each group to meet the standard, complete all to exceed the standard.

Acute angle	
Obtuse angle	
Right angle	
Straight angle	
Complementary angles	
Supplementary angles	
Vertical angles	
Adjacent angles	
Corresponding angles	

Parallel lines	
Perpendicular lines	
Transversal	

Triangle	
Formula for area	
Perimeter of a triangle	

Acute triangle	
Obtuse triangle	
Right triangle	
Equilateral triangle	
Isosceles triangle	
Scalene triangle	

Square	
Formula for Area	
Rectangle	
Formula for Area	
Parallelogram	
Formula for Area	
Rhombus	
Formula for Area	
Trapezoid	
Formula for Area	

Pentagon	
Hexagon	
Heptagon	
Octagon	
Nonagon	
Decagon	
Dodecagon	

