

Spring Final Project Rubric and Information - DRAFT

Criteria	C-level:	B-level – includes all of C level plus:	A-level – includes all of B-level plus:
Types of Parent Functions used	<ul style="list-style-type: none"> • Lines • Absolute Value • Parabolas • One polygon • Two circles with h and k transformations OR one circle and one polynomial function 	<ul style="list-style-type: none"> • A Piecewise function in a folder • More than one polygon • Must include at least one moving function (slider) 	<ul style="list-style-type: none"> • Ellipse with a or b transformations • Insert and image to move around the plane by attaching it's coordinates to a function with a slider • Other function(s) not yet studied – sine or other
Number of equations, inequalities, or shapes to use	<ul style="list-style-type: none"> • 15 	<ul style="list-style-type: none"> • 25 • Insert slider(s) to activate function(s) 	<ul style="list-style-type: none"> • 40, create folders for objects • Insert slider(s) to activate function(s)
Domain & Range Restrictions	Restrict to first Quadrant; Domain restrictions used on all functions (unless unwarranted)	Restrict to first Quadrant; Domain and range restrictions used on all functions (unless unwarranted)	Same as B-level
Color & patterns	Use of shading and color for at least some equations or shapes; Use of dashes or dotted lines for at least some equations or shapes	Same as C level	Increased use of shading; Include an additional feature – be creative!
<p>For all projects: Complete the Course at Desmos https://learn.desmos.com/text-folders-and-images</p> <p>Test yourself here: https://student.desmos.com/?prepopulateCode=5fsc</p>			

Parent functions:

Lines: $y = a$ $x = b$ $y = mx$ $y = mx + b$

Absolute value: $y = a|x - h| + k$

Parabolas: $y = a(x - h)^2 + k$

Cubic: $y = a(x - h)^3 + k$

Higher order polynomials: $a(x - r_1)(x - r_2) \dots (x - r_n)$

Circle: $(x - h)^2 + (y - k)^2 = r^2$

Ellipse: $\frac{(x-h)^2}{a} + \frac{(y-k)^2}{b} = 1$

Sine: $y = a \sin(x - h) + k$

Helpful links:

1. Color and styling: <https://youtu.be/3H37Vvn42bs>
2. Making a polygon: <https://www.youtube.com/watch?v=x3rEQ-YiTrA>
3. Adding sliders: <https://youtu.be/9MChp2P0vMA>
4. Restricting Domain and Range: https://youtu.be/dnz_Ez5Plfl
5. General help: https://www.youtube.com/playlist?list=PLfM6zMGnbgOGLZc-Yj3QVK3Vz_L4Cw59
6. Folders: <https://support.desmos.com/hc/en-us/articles/204980525-Folders>
7. Backgrounds: <https://youtu.be/v5R-oz59bQA>
8. Piecewise functions: <https://support.desmos.com/hc/en-us/articles/203192385-Piecewise>
9. Desmos Art project Competition results: <https://www.desmos.com/art>