

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 	<ul style="list-style-type: none"> • One polygon • Two circles with h and k transformations OR one circle and one polynomial function 	<ul style="list-style-type: none"> • Additional functions and shapes from levels C and B • Ellipse with a or b transformations • Other function(s) not yet studied (optional)
Number of equations, inequalities, or shapes to use	• 8-10	• 11-14	• 15-20
Domain 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 color for at least some equations or shapes; Use of dashes or dotted lines for at least some equations or shapes	Use of shading for at least two areas	Insert slider(s) and activate a function

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

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