Name _____   Period _____

<u>PRECALCULUS</u> PROJECT – QUARTER 1

Create one (1) GUIDE or PRESENTATION for one (1) precalculus topic that we have LEARNED this year in Precalculus (see below for list of acceptable topics). Creatively reteach, review and/or enhance one of these topics using technology, graphs, images, and equations to enhance your presentation. Create something that will help others to learn your chosen topic – make it **eye-catching** and effective! Your presentation may be shared with our class at a later time. This project guidelines paper, with name and period filled in, must be submitted in hard copy form the day you submit your completed project.

Some technological ideas: video, FlipGrid video, song, Prezi presentation, slides/presentation, etc.

- ***Projects are due on Tuesday, November 6, 2018 by 12:00pm through our Google Classroom / Site. No projects will be accepted after Wednesday, November 14, 2017. Appropriate deductions will be made for late projects.***

- The project will be graded out of a total of sixteen (16) points in the performance assessment category of your grade. Your mathematical guide/presentation will be evaluated for:

  - _____*(8 pts)* Mathematical content / Guide

  - _____*(2 pts)* Incorporation and/or use technology to enhance understanding/presentation of topic

  - _____*(2 pts)* Creativity/Neatness/Effort/Presentation

  - _____*(2 pts)* Mnemonic device or way to help you/your audience remember how to correctly complete your topic

  - _____*(2 pts)* Written reflection – Why did you choose this topic? How did this project help you? (Write in 4-8 complete sentences and submit with your project via Google classroom OR on reverse side of this paper with grading rubric.)

Topics: **You must address all aspects of your concept, as studied this year.**
- difference quotient
- finding domains algebraically. Include polynomials, rational functions, radicals, and rational function with radical(s) in the numerator and/or the denominator
- determining even/odd/neither functions (BOTH algebraically & graphically)
- increasing, decreasing and constant intervals, in interval notation
- graphing and evaluating piecewise functions (must include multiple, non-linear pieces and identify domain and range)
- evaluating greatest integer function & transformations of its graph
- transformations of functions (including ALL function families and ALL types of transformations)
- composition of functions, including domain
- operations of functions (addition, subtraction, multiplication, division) AND their domains
- finding the inverse of a function, determining algebraically if two functions are inverses, AND graphing a function and its inverse
- solving absolute value inequalities to determine the domain of a function
- solving quadratic inequalities to determine the domain of a function

(Grading Rubric and Reflection on back)

GRADING RUBRIC:

Mathematical Content / Guide (each "•" earns the number of points in that column; Maximum total = 8pts)

4 pts each	3 pts each	2 pts each	1 pt each	Total (out of 8):
• All content is mathematically precise and presented in a logical manner. • All skills/sub-concepts within this topic are addressed.	• Most content is mathematically precise and presented in a logical manner. • Most skills/sub-concepts within this topic are addressed.	• Some content is mathematically precise and presented in a logical manner. • Some skills/sub-concepts within this topic are addressed.	• Minimal content is mathematically precise and presented in a logical manner. • Minimal skills/sub-concepts within this topic are addressed.	

	2 points	1 point	0 points	Total:
Incorporates Appropriate Technology	Technology is used and/or included that enhances the concept	Technology is used and/or included but does not enhance learning	Does not include technology in presentation/project	
Creativity/Neatness/ Effort/ Presentation	Is visually appealing AND presented as a FINAL project	Shows effort but may not be visually appealing OR not presented as a final project	Does not demonstrate effort AND not presented as a final project	
"Mnemonic device" / Strategy	Strategy is logical and appropriate for mathematical concept	Strategy contains minor errors but still relates to mathematical concept	Does not include strategy or contains major errors	
Reflection	Completely answers **_both_** reflection questions in complete sentences.	Does not use complete sentences or does not fully answer **_both_** questions.	Does not include reflection OR does not use complete sentences AND does not fully answer **_both_** questions.	

TOTAL POINTS EARNED _____ / 16

Reflection: I choose this topic because … This project helped me to …

_____

_____

_____

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