

DATE: June 1, 2022

TO: Andrew Pesci, Franklin High School
Kevin Etue, Churchill High School
Pete Mazzoni, Stevenson High School

FROM: Rebecca Caldwell
7-12 Math and Science Curriculum Coordinator

SUBJECT: Textbook Recommendation for HS Precalculus/ Accelerated PreCalculus

This memo recommends the purchase of the newest edition of *PreCalculus with Limits, A Graphing Approach, 8e, 2020*. The details below provide more information about the process and information to support the recommendation.

Committee Members

Franklin HS: Kevin Hafner
Churchill HS: Lynda Melcher and Julie Perales
Stevenson HS: Paula Nowell, Beth Somjak, Holly Morrow

Recommended Materials for Adoption

Larson's PreCalculus with Limits textbook and online materials from Cengage.

Cost proposal is attached.

Summary of Course(s)

PreCalculus is the math course after Algebra 2. Many students take this as their senior year math course or prior to AP Calculus as a junior. There are approximately 400 total students enrolled in PreCalculus each school year at LPS.

Overview

This recommendation is an updated version of the previously adopted PreCalculus with Limit, A Graphing Approach, 3e, 2001. Teachers and students found the textbook supports the curriculum in its approach to skill practice and problem solving. The third edition does not have digital resources and the physical books are deteriorating. Many books have already been rebound and are no longer holding up.

Evaluation Process

Teachers from each high school formed a committee to create a vision for PreCalculus at LPS, evaluate the current resource and what would be necessary in a future resource for students to be successful. Teachers were open to evaluating and adopting a new resource or continuing with an updated version of the current resource. Once the rubric was applied the teachers considered *Blitzer, PreCalculus*, and *Larson, PreCalculus with Limits*. After reviewing the online options of both, it was clear the updated edition of *PreCalculus with Limits* would provide students with the best digital resources in addition to the physical textbook.

Shared Vision

PreCalculus is a course taken after completion of Algebra 2. For some students PreCalculus is their terminal math course at LPS and for others it leads to enrollment in AP Statistics or AP Calculus. LPS offers

PreCalculus and Accelerated PreCalculus courses. Regardless of the course, LPS is committed to providing students with a standards based, aligned curriculum with an emphasis on high level mathematical thinking. We are committed to using one resource for all students enrolled in PreCalculus to assure all students have access to updated, aligned curriculum resources.

Evaluation Criteria

We evaluated the textbooks using a rubric with the following criteria:

- Supports Michigan State Standards/ Common Core
- Math Coherence and Rigor for ALL students
- Balance of skill development, conceptual understanding, and rich math tasks
- Reflect the needs and diversity of LPS students
- Offer reteaching and extensions opportunities
- Discourse, engagement, critical thinking
- Assessment (formative and summative)
- Digital platform/ Textbook

Textbooks Considered

Blitzer, PreCalculus, 2022

Larson, PreCalculus with Limits, 2020

Pearson, PreCalculus, 2019

Miller and Gerken, PreCalculus, 2017

Glencoe, PreCalculus, 2014

Evaluation Rubric Outcome

The results of the rubric rating showed the best resource for LPS students was the updated edition of the current resource. The Larson online resources were much easier to use and access compared to Blitzer. Teachers found the <https://www.larsonprecalculus.com/pcwlaqa8e/> author website to include collaborative projects and interactive activities that complimented the textbook.

Student Response

Students favored the online features of Larson which includes QR codes next to a problem that takes students to a video explanation using just the camera on their phone. The Larson book has an online Calc Chat feature in which students can get live help from 4-midnight, Sunday - Thursday.

<https://www.calcchat.com/book/Precalculus-with-Limits-AGA-8e/>

Professional Development Needs

The online features are very easy for students and teachers to navigate. The program offers an online homework feature called WebAssign. Teachers will have PD through a live, virtual webinar on how to use WebAssign with students.

For additional information on this recommendation, contact Rebecca Caldwell at x42144.

CC

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HS Math Department Chairs