2017-2018 WCSD Algebra 2 Program Evaluation Rubric

Evaluator Number

3

Program Number

1

Name of Text

En Vision Algebra 2

Publisher

Pearson

Rate This Text Overall

- [x] **High**
- [ ] **Mid**
- [ ] **Low**

Focus: Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons. (Both student and teacher materials)

Functions - Graphing Transformations

Translating, stretching, shrinking and reflecting the graphs
Absolute Value, Quadratics, Exponential, Rational, Radical, Piecewise and Step Functions

Quadratic Functions with Complex Solutions

Graph Vertex, Standard and Intercept Forms
Solve in Vertex, Standard (quadratic formula, complete square) and Intercept Form
Write equations in 3 unknowns to write a quadratic given three points

Polynomials and Polynomial Functions

Add, subtract, multiply and divide – include property of closure
Graph polynomial functions
Solve polynomial equations
Model using polynomial functions

Rational Functions

Add, subtract, multiply and divide – include property of closure
Graph rational functions
Solve rational equations (extraneous solutions)
Model using rational functions

Radical Functions (Rational Exponents)

Add, subtract, multiply and divide – include property of closure
Graph radical functions
Solve equations with radicals (extraneous solutions)
Model using radical functions

Inverse Functions

Explore inverse functions
Use composition to show two functions are inverses
Use function notation, graphs and solving to find inverses

Exponential Functions

Add, subtract, multiply and divide exponential expressions – use properties of exponents
Graph exponential functions
Solve equations with exponential expressions (extraneous solutions)
Model using exponential functions

Logarithmic Functions

Add, subtract, multiply and divide logarithmic expressions – use properties of logs
Graph logarithmic functions
Solve equations with logarithmic expressions (extraneous solutions)
Model using logarithms functions

Statistics

S.ID.A (1-4)

Systems of Equations

A.RET.C.5

3 variable linear
Quad/linear
Poly/linear
Rational/linear

Graphing Form of Functions

Transformations

At least 90% of the topics are in the textbook with reference to topics.
Comments?

Yes, including brief function definition review, linear programming as modeling in linear functions and systems chapter. Extra section on Matrices.

- ○ Less than 25%
- ○ Less than 50% but greater than 25%
- ○ Less than 90% but greater than 50%
- ◉ At least 90%

Student work involves significant work with applications/modeling and problems that use algebra skills.
Comments?

Large focus on modeling on nearly every page. Text uses concept and Mathematical practice type to identify problems.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

There are problems at a level of sophistication appropriate to Algebra 2 (beyond the mere review of Algebra 1 course topics) that involve the application of knowledge and skills needed.
Comments?

Yes, "communicate precisely", "make sense and persevere" problems occur throughout text. SAT/ACT practice in each lesson.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Do the chapter/units provide for the opportunity to graph the functions, solve for the zeros of the functions and model using applications of the functions?
Comments?

Yes, as noted above. Multiple representations occurs throughout.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Rigor: Examine the instructional materials, student practice and assessments. Look for evidence of where the topics explicitly require students to understand concepts, do the assignments that students work on build that understanding, and do assessment tasks reveal whether students understand the mathematics in question?
Comments?

Students understand, practice and apply. Each practice problem is coded with its corresponding example problem. Performance tasks included in every lesson.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Rigor: Do the materials feature high-quality conceptual problems and conceptual discussion questions? Do they provide opportunities for multiple representations?
Comments?

Yes, as previously noted.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Rigor: Are the materials designed so that students attain the fluency and procedural skills required? Evaluate the lessons, chapter/unit assessments, daily routines, and homework assignments for evidence in the development of fluency and procedural skill supported by conceptual understanding.
Comments?

Yes, a good medium set of practice problems for fluency coded by example number. Note that this text uses Examples as a way to present material. Each example states the topic it is addressing. Each example poses questions, this is a PBL type approach. A student companion book is included to focus student note taking.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Rigor: Are the materials designed so that teachers and students spend sufficient time working with applications, without losing focus on the topics defined for the course? Are there single- and multi-step contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving?
Comments?

Yes, modeling problems are short, but frequent.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Coherence: Are the materials coherent in their content, do the topics build on each other in a way that is beneficial to the instruction, student practice and assessments?
Comments?

Yes, follow a standard type approach to material. Includes a separate probability chapter to note that probability can be a topic in itself, not just embedded in statistics.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Mathematical Practices: Are the mathematical practices addressed in such a way to benefit instruction and expectation of students?
Comments?

Yes, student can see in the student edition the MP's they are working with. Standards are listed in a table at front of student edition.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Standards: Does the instructors text reference the standards in the chapters/units?
Comments?

Not available at time of review.

- ● Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ○ Consistently occurs

Does the textbook meet requirements/rigor for algebra 2 Honors, yet remain appropriate for Algebra 2?
Comments?

Topics of advanced nature have been highlighted in user's guide. Designated as Core or Advanced.

- ○ Does not occur
- ○ Sometimes occurs
- ● Frequently occurs
- ○ Consistently occurs

How do the supplemental materials reflect/extend the material in the textbook?
Comments?

On line Pearson Realize contains extensive supplemental materials. Would like to see evidence of spiral review in some form on supplemental materials. Math XL can be part of the program.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ○ Consistently occurs