<table>
<thead>
<tr>
<th>CURRICULUM</th>
<th>Focus on fundamental Algebra II skills with plenty of time for learning.</th>
<th>Additional topics (Matrices, Complete Course of Trigonometry, Conic Sections) projects, explorations and extensions are added into the same curriculum, requiring a faster pace of learning for Algebra II topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALGEBRA I GEOMETRY</td>
<td>Support/reteaching/reminders are given for Algebra I and Geometry concepts.</td>
<td>Students must know/remember major skills from Algebra 1 and Geometry with little support</td>
</tr>
<tr>
<td>SKILLS</td>
<td></td>
<td></td>
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<tr>
<td>SPIRALING</td>
<td>Reminders and support are provided when curriculum spirals back to previously learned material</td>
<td>Students are expected to remember prior topics/information throughout the year without prompting</td>
</tr>
<tr>
<td>ALGEBRA AND GEOMETRY</td>
<td>Algebra I skills are reviewed before more challenging Algebra II skills are presented.</td>
<td>Algebra 1, Geometry, and Algebra II skills are strongly integrated with the intention of preparing students for Precalculus Honors.</td>
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<tr>
<td>INTEGRATION</td>
<td></td>
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<tr>
<td>PROBLEM-SOLVING</td>
<td>Multi-step, challenging, problems are supported with instruction and review.</td>
<td>Emphasis on higher-level, complex, multi-step and otherwise challenging problems</td>
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<tr>
<td>LEVEL OF ABSTRACTION</td>
<td>Symbolic language is supported; problems and exercises are more concrete</td>
<td>Fluent and accurate use of symbolic language is expected; problems and exercises, though based in concrete explorations, integrate abstract calculations seamlessly</td>
</tr>
<tr>
<td>STUDENT LEARNING</td>
<td>Teacher provides support for study skills and proper use of time, as well as support for written and verbal instructions.</td>
<td>Students are expected to self-pace, self-direct and self-advocate; students should be able to follow written and verbal instructions without support or reminders</td>
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<tr>
<td>STYLE</td>
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</tbody>
</table>
SAMPLE PROBLEM #1

(difference in skill level)

\[
\frac{4}{x} = \frac{3x}{x - 3}
\]

\[
4(x - 3) = 3x^2 \\
4x - 12 = 3x^2 \\
3x^2 - 4x + 12 = 0
\]

\[
x = \frac{4 \pm \sqrt{16 - 144}}{6} = 0
\]

\[
x = \frac{4 \pm \sqrt{-128}}{6}
\]

\[
x = \frac{4 \pm 8i\sqrt{2}}{6}
\]

\[
x = \frac{2 \pm 4i\sqrt{2}}{3}
\]

Skills needed:
- Clearing Fractions
- Solving Quadratics

SAMPLE PROBLEM #2

(difference in skill and support level)

\[
8 = 2^{x+1}
\]

\[
2^3 = 2^{x+1} \\
3 = x + 1 \\
x = 2
\]

\[
\sqrt[27]{9x+3} = 81
\]

\[
\sqrt[3]{\frac{3^{2(x+3)}}{3^{3x}}} = 3^4 \\
\frac{3^{2(x+3)}}{3^{3x}} = 3^8 \\
3^{2x+6-3x} = 3^8 \\
3^6-x = 3^8 \\
6 - x = 8 \\
x = -2
\]

Skills needed:
- Factoring
- Clearing Fractions
- Solving Quadratics