Questions for Teachers to Supplement Released Items

The purpose of this document is to provide guidance to educators about using the items released from the ADP Algebra I and Algebra II End-of-Course Exams. It is our hope that these items will be integrated into classroom curriculum for Algebra I and Algebra II courses.

Mathematical Content

- What prior mathematical knowledge does the student need to know to approach this item?
- What instructional scaffolding, strategies, or questioning are necessary to get students from the prior knowledge to the knowledge necessary to correctly answer this item?
- What are the underlying mathematical concepts being addressed in the item? How can instruction be adjusted to focus on these concepts and move beyond the algorithmic processes?
    - What are specific educational considerations for high needs learners, such as English language learners or those with learning disabilities?
- How can the mathematics in this item be used to build to a higher level of mathematics in future courses or to a better understanding of other disciplines?
- What other methods or strategies can be used to solve the item (algebraically, graphically…)?
- What additional mathematics does the teacher need to know in order to provide alternative approaches and solutions for this item?
- On what items did students do well? How did instruction support this learning?
- What are the common student mistakes and/or misconceptions with this item? How can instruction be adjusted to attend to these common mistakes and/or misconceptions?
    - What are specific educational considerations for high needs learners, such as English language learners or those with learning disabilities?
- What information do the distracters provide? How can this information be used to help students understand their errors?

Expansion of Concept

- How could this item be used as part of a mathematically coherent lesson?
- What other benchmarks would need to be considered to complete the lesson?
- How does the mathematics from this item support a larger lesson of the concepts involved?
- How can the item be changed or adapted to make connections to other benchmarks and related mathematical ideas?
- Which student-generated solution strategies would you highlight? Why?
- How can released items be used to enhance instruction that is aligned with the state's standards?

Exploration of Technology

- How could technology be used to explore the concept being tested in this item?
- How does the solution strategy for solving this problem change if:
    - it was a calculator item that would not allow a calculator?
    - it was a non-calculator item that would allow a calculator?
- What are the advantages and disadvantages of using the technology?