

Challenge

Planning Notes

- Read and discuss #1 and #2.
- Review how to change a percent to a decimal number, and how to use the distributive property.
- Encourage students to use a calculator.
- Remind students to use terminology related to inequalities when answering #1b) and #2c).

Common Errors

- Some students may have difficulty doing such a large assignment.
- R_x** Complete the assignment over two classes. Discuss and work through #1 in the first class, and then discuss and work through #2 during the second class. Alternatively, students could do #1 individually and #2 in pairs, discussing the question but each completing their own work.

The chart below shows the Rubric for the Challenge and provides notes that specify how to identify the level of specific answers for this project.

Score/Level	Holistic Descriptor	Specific Question Notes
5 (Standard of Excellence)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops thorough strategies and mathematical processes for making significant comparisons/connections that demonstrate a comprehensive understanding of how to develop a complete solution <input type="checkbox"/> Uses efficient and effective procedures that may contain a minor mathematical error that does not affect understanding <input type="checkbox"/> Uses significant mathematical language to explain understanding and provides in-depth support for the conclusion 	<ul style="list-style-type: none"> • provides a complete and correct solution
4 (Above Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops thorough strategies and mathematical processes for making reasonable comparisons/connections that demonstrate a clear understanding <input type="checkbox"/> Uses reasonable procedures that may contain a minor mathematical error that may hinder the understanding in one part of a complete solution <input type="checkbox"/> Uses appropriate mathematical language to explain understanding and provides clear support for the conclusion 	<ul style="list-style-type: none"> • provides a complete response with weak justification in #2c) or d) <i>or</i> • provides a complete response with a calculation error in one of the inequalities <i>or</i> • provides a complete response but the goal and resulting price in #2 are not reasonable; calculations are correct <i>or</i> • provides a correct and complete response without using an inequality
3 (Meets Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops relevant strategies and mathematical processes for making some comparisons/connections that demonstrate a basic understanding <input type="checkbox"/> Uses basic procedures that may contain a major mathematical error or omission <input type="checkbox"/> Uses common language to explain understanding and provides minimal support for the conclusion 	<ul style="list-style-type: none"> • correctly completes #1a) and b) and #2a) and b) <i>or</i> • provides a complete and correct response to #1 or #2 <i>or</i> Note: Providing inequalities and answers without justification earns a score of 3.
2 (Below Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops some relevant mathematical processes for making minimal comparisons/connections that lead to a partial solution <input type="checkbox"/> Uses basic procedures that may contain several major mathematical errors <input type="checkbox"/> Communication is weak 	<ul style="list-style-type: none"> • correctly derives two inequalities but is unable to solve them <i>or</i> • provides a correct inequality and solution for #1a) and b) or #2a) and b) without any justification
1 (Beginning)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops an initial start that may be partially correct or could have led to a correct solution <input type="checkbox"/> Communication is weak or absent 	<ul style="list-style-type: none"> • provides a correct response to either #1 or #2 <i>or</i> • provides an start that could have led to a correct step