Graphic Organizer

- Encourage students to enhance the Graphic Organizer with colour and font variations.
- You may wish to photocopy the Graphic Organizer onto 11 × 17 paper so there is room for students to write a non-example for each key term. This may help them clarify their definition.
- You may wish to allow students to use their Graphic Organizer as a reference sheet during the test.

Math Link: Wrap It Up!

Planning Notes

- Students may find the symbols difficult to follow. You may wish to have them work through the first numeric example in pairs and then discuss it as a larger group.
- Encourage students to look back at the other Math Links to help generate ideas for their tricks.

Common Errors

- Students may have difficulty making their trick work if they choose to end the trick where they start.

R$_x$ Remind students that if they want to end where they started, some of the steps need to reverse earlier steps. They can undo a step with a combination of steps that have the desired overall result.

- Students may struggle to get started.

R$_x$ Encourage them to decide on a goal, such as creating a trick that ends with the number they started with, or some pattern they already know.

The chart below shows the Rubric for the Math Link: Wrap It Up! 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)**	❑ Applies/develops **thorough** strategies and mathematical processes for making **significant** comparisons/connections that demonstrate a **comprehensive** understanding of how to develop a complete solution ❑ Uses **efficient** and **effective** procedures that may contain a **minor mathematical error** that does not affect understanding ❑ Uses **significant** mathematical language to explain understanding and provides **in-depth** support for the conclusion	• provides a correct and complete solution
4 **(Above Acceptable)**	❑ Applies/develops **thorough** strategies and mathematical processes for making **reasonable** comparisons/connections that demonstrate a **clear** understanding ❑ Uses **reasonable** procedures that may contain a **minor mathematical error** that may hinder the understanding in one part of a complete solution ❑ Uses **appropriate** mathematical language to explain understanding and provides **clear** support for the conclusion	• provides a correct solution to all parts of the problem with weak or missing justification in part b) *or* • provides a correct and complete solution to all parts of the question, but the entire response is limited to one set of arithmetic numbers in both parts a) and c)
3 **(Meets Acceptable)**	❑ Applies/develops **relevant** strategies and mathematical processes for making **some** comparisons/connections that demonstrate a **basic** understanding ❑ Uses **basic** procedures that may contain a **major mathematical error** or **omission** ❑ Uses **common** language to explain understanding and provides **minimal** support for the conclusion	• provides a correct solution to parts a) and b) for one set of arithmetic calculations *or* • provides a correct and complete solution to part c) *or* • provides a correct start to all parts of the question; both sets of numbers are given in parts a) and c), but calculations are limited
2 **(Below Acceptable)**	❑ Applies/develops **some relevant** mathematical processes for making minimal comparisons/ connections that lead to a **partial solution** ❑ Uses **basic** procedures that may contain several major mathematical errors ❑ Communication is **weak**	• provides a correct and complete part a) for one of the arithmetic calculations *or* • provides a complete solution to part c) for one of the arithmetic calculations; communication may be weak
1 **(Beginning)**	❑ Applies/develops an **initial start** that may be **partially correct** or could have led to a correct solution ❑ Communication is **weak** or **absent**	• provides a correct initial attempt at part a), identifying two numbers and beginning to solve steps 3 and 4