Challenge

Planning Notes

- Provide students with **BLM 8–9 Chapter 8 Challenge**. Have them cut out the cards rather than create their own.
- Model steps 4 to 6. Have students practise these steps with their partners.
- You may wish to have struggling students play in pairs. The first pair creates the equation and the second pair solves the equation. Award points for getting the correct answer. The whole group must agree on the correct answer.
- Award points as follows:

$ax = b$	$\frac{x}{a} = b$	$ax + b = c$	$\frac{x}{a} + b = c$	$a(x + b) = c$
1 point	2 points	3 points	4 points	5 points

- The first team to get 15 points wins.

Common Errors

- Students may check their answers by reviewing the steps for solving.

R$_x$ Encourage students to check their solutions to settle disputes over differing solutions. Post examples of checking using substitution for each type of equation.

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)**	❑ 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 complete and correct 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 complete response with a minor calculation error that does not hinder understanding *or* • provides a correct and complete solution with weak justification
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	• correctly completes #1 to #4; solving the equation to verify the partner's work may be incomplete or incorrect *or* • correctly completes partial solutions to all parts of the exercise *or* • provides equations and answers only with no mathematical support or justification
2 **(Below Acceptable)**	❑ Applies/develops **some relevant** mathematical processes making minimal comparisons/ connections that lead to a **partial solution** ❑ Uses **basic** procedures that may contain **several major mathematical errors** ❑ Communication is weak	• correctly completes #1 to #3; may also select some cards for #4 but does not write an equation
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**	• makes an initial start to one part of the exercise