

## Unit 2 Assignment - Games with Polynomials!

Due Date: \_\_\_\_\_

In this Unit, we have been playing many types of games to review the skills needed to understand and and apply the math concepts taught. Your assignment is to create a game to test knowledge from this unit! **The game WILL be sent to Grade 11 Math students at another school to play, and they will send feedback!**

### Here are the guidelines:

- Your game cannot be one that was used this unit (Battleship, Matching Cut-Out puzzle, matching card game, colouring chart, radical card game).
  - It can be a variation (i.e., memory, instead of matching game)
- Your game should have enough questions to take at least 10 minutes to play.
- The level of question should vary, and should be at an appropriate level (not too easy or too hard).

### What you need to hand in:

- Name of the game
- Questions (that YOU make up) with answer key
- Your rough work
- **\*\*For 5 of your questions, show 2 OR 3 different ways to solve them & reflect on the choices (which is easiest, which is most difficult, etc, and why?)\*\***
- Rules for the game (including list of materials, if applicable)
- The game itself

### Tips:

- Be creative!! (use colour, pictures, etc)
- It does NOT have to be on paper
- Make sure the game makes sense to play and flows nicely
- Make sure the questions are at a suitable level (similar to “at” practice questions)
- **Be organized!** You’re handing in multiple components that might be different in size/weight/etc.! Use something to keep it all together and organized (folders, boxes, bags, etc.).
- **Not sure where to start?** Think of games that already exist and modify/extend them (think game shows, board games, etc).

## Rubric

**Learning Goal:** *I can demonstrate an understanding of equivalence as it relates to simplifying polynomial, radical, and rational expressions.*

Category	Level 4 Above & Beyond (80-100%)	Level 3 Proficient (70-79%)	Level 2 Approaching (60-69%)	Level 1 Beginning (50-59%)
<b>Knowledge &amp; Understanding</b>				
The student can create a polynomial expression and correctly simplify it.	The student correctly simplifies a polynomial expression with a high degree of efficiency.	The student correctly simplifies a polynomial expression with considerable efficiency.	The student correctly simplifies a polynomial expression with some efficiency.	The student correctly simplifies a polynomial expression with limited efficiency.
The student can factor polynomials using a variety of techniques.	The student correctly factors a polynomial with a high degree of logic.	The student correctly factors a polynomial with considerable logic.	The student correctly factors a polynomial with some logic.	The student correctly factors a polynomial with limited logic.
The student can create a radical expression and correctly simplify it.	The student correctly simplifies a radical expression with a high degree of logic.	The student correctly simplifies a radical expression with considerable logic.	The student correctly simplifies a radical expression with some logic.	The student correctly simplifies a radical expression with limited logic.
The student can create a rational expression involving polynomials and correctly simplify it.	The student correctly simplifies a rational expression involving polynomials with a high degree of logic.	The student correctly simplifies a rational expression involving polynomials with considerable logic.	The student correctly simplifies a rational expression involving polynomials with some logic.	The student correctly simplifies a rational expression involving polynomials with limited logic.
<b>Thinking &amp; Investigation</b>				
The student can accurately solve a polynomial expression using a variety of resources.	The student can solve a polynomial expression with a high degree of breadth.	The student can solve a polynomial expression with considerable breadth.	The student can solve a polynomial expression with some breadth.	The student can solve a polynomial expression with limited breadth.
The student can distinguish between methods used through reflection.	The student can distinguish between methods used with a high degree of mastery.	The student can distinguish between methods used with considerable mastery.	The student can distinguish between methods used with some mastery.	The student can distinguish between methods used with limited mastery.

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<b>Communication</b>				
The student can correctly state and explain the restrictions on variables.	The student states and explains restrictions with a high degree of clarity.	The student states and explains restrictions with considerable clarity.	The student states and explains restrictions with some clarity.	The student states and explains restrictions with limited clarity.
The student can distinguish between methods used through reflection.	The student can distinguish between methods used with a high degree of fluency.	The student can distinguish between methods used with considerable fluency.	The student can distinguish between methods used with some fluency.	The student can distinguish between methods used with limited fluency.
<b>Application</b>				
The student can create two expressions that are equivalent.	The student creates equivalent expressions with a high degree of comprehension.	The student creates equivalent expressions with considerable comprehension.	The student creates equivalent expressions with some comprehension.	The student creates equivalent expressions with limited comprehension.

	<b>K</b>	<b>T</b>	<b>C</b>	<b>A</b>	<b>Total</b>
<b>Raw</b>	/16	/8	/8	/4	/32
<b>Weighted</b>	(20%)	(30%)	(20%)	(30%)	