Unit 4 Day 8: Summative Task Evaluation – Day 1		Grade 10 Applied
Minds On: 10 Min. **Action**: 60 Min. **Consolidate/ Debrief**: 5 Min **Total = 75 Min.**	**Math Learning Goals** • Create contextual linear systems problems, complete with solutions and graphs, and present them in a visual format e.g., poster project or PowerPoint slideshow.	**Materials** • BLM 4.8.1-4.82 • Graph paper • Rulers • Poster paper • Glue • Computer Algebra Systems (CAS)

				Assessment Opportunities
	Minds On…	**Whole Class → Activity Instructions** Distribute BLM 4.8.1, which outlines the project. Introduce the activity by discussing the many contextual problems studied in class, as well as the example on BLM 4.8.1 Read through the instructions and the rubric (BLM 4.8.2) expectations	↻	
	Action!	**Individual → Activity** Students will develop their own set of linear equations to analyze as a system, which fit into a contextual problem that they design. Graphical and Algebraic solutions will be included. Students should create questions around their scenario, and provide solutions for these questions.		
	Consolidate Debrief	**Individual → Collection of Materials** Collect materials and individual class work to gauge progress of each student.		
	Concept Practice Skill Drill	**Home Activity or Further Classroom Consolidation** Students will complete a selection of exercises for review and practice for paper/pencil assessment.		

4.8.1: Linear Systems Summative Task

Introduction:

The following two equations can be used to represent "real life" situations (real-life applications of lines)

$$y = 4x + 24$$
$$y = 10x$$

You will be coming up with your own equations that represent "real-life" situations and present a poster project, or PowerPoint presentation with the applications related to your equations.

Step 1: Come up with your "real-life: situation

      EXAMPLE:

Situation 1: An online cd company, Cool Cd's, charges a monthly membership of $24, plus
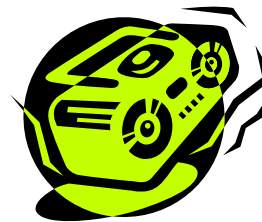 $4 per cd purchased
Situation 2: Another online cd company, Star Struck Music charges $10 per cd

Equation 1: $y = 4x + 24$

Equation 2: $y = 10x$

Let x represent the number of cds
Let y represent the total cost of cds for one month

      PLACE YOUR REAL-LIFE SITUATION HERE:

Situation 1:

Situation 2:

Equation 1:

Equation 2:

Let x represent

Let y represent

4.8.1: Linear Systems Summative Task (Continued)

Step 2: Solve your system of equations

On your poster or in your PowerPoint presentation you will need to demonstrate how to solve your linear system using as least two different methods (one method being graphing, and the other being substitution or elimination).

> SOLVE YOUR LINEAR SYSTEM HERE (substitution or elimination)
> NOTE: this is a draft of the final solution you will show on your poster/presentation

Conclusion:

Step 3: Create Poster/Presentation

The following are requirements for your poster/presentation (check them off as you complete each requirement):

- ☐ Let statements (let x represent…etc.)

- ☐ Your real-life situations

- ☐ The two equations

- ☐ A graph showing both lines, labels, and the intersection point

- ☐ An algebraic method for solving your system

- ☐ Checks for both equations (LS/RS checks)

- ☐ What the intersection point represents in your situation

- ☐ A question you can pose to the class based on your real-life situation AND the solution to the question (e.g., Which cd company would you choose if you were buying 15 cds?)

4.8.2: Summative Task Rubric

Name:_____

CATEGORY	LEVEL R	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Knowledge	No evidence	Shows limited understanding of the concepts	Shows some understanding of the concepts	Shows an understanding of the concepts	Shows a high degree of understanding
Application	No evidence	Question shows a limited connection between linear systems and a real life situation	Question shows some connection between linear systems and a real life situation	Question shows a strong connection between linear systems and a real life situation	Question shows a distinct and original connection between linear systems and a real life situation
Communication	No evidence	Question and solutions show limited clarity	Question and solutions show some clarity	Question and solutions show clarity	Question and solutions show a high degree for clarity
Poster/Presentation	No evidence	Poster/Presentation lacks detail, and is missing requirements	Poster/Presentation contains most of the requirements	Poster/Presentation is colourful, neat, but is missing some minor elements	Poster/Presentation is colourful, creative, neat, and included all requirements

Comments:

Unit 4 Day 9: Summative Task Evaluation – Day 2		Grade 10 Applied
Minds On: 5 Min. **Action**: 65 Min. **Consolidate/ Debrief**: 5 Min **Total = 75 Min.**	**Math Learning Goals** • Exchange problems created amongst them for others to solve, verify their solutions, and justify the selection of preferred method of solution. • Finalize their three linear-system problems, making necessary changes based on input from peers.	**Materials** • BLM 4.8.1-4.82 • Graph paper • Rulers • Poster paper • Glue • Computer Algebra Systems (CAS)

			Assessment Opportunities	
	Minds On…	**Whole Class → Activity Instructions** Distribute work from Day 1. Review with the class and discuss possible adjustments as needed. Suggest CAS handheld as an additional tool for checking solutions. Remind them to follow the requirements checklist, and refer to the rubric (BLM 4.8.2) expectations.	↩	
	Action!	**Individual → Activity** Students should be given 65 minutes to work individually on completing their poster project or PowerPoint Presentation.		
	Consolidate Debrief	**Individual → Collection of Materials** Collect materials, including soft copy files of PowerPoint Presentations.		
	Concept Practice Skill Drill	**Home Activity or Further Classroom Consolidation** Students will complete a selection of exercises for review and practice for paper/pencil assessment.		