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Mathematics 10C
MAT1791
Unit 7 Final Review Workbook

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Summary

	Marks Earned	Total Possible Marks	Percent
Unit 7 Final Review Assignment		22	

Teacher's Comments:

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Teacher's Signature

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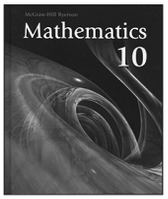

Mathematics 10

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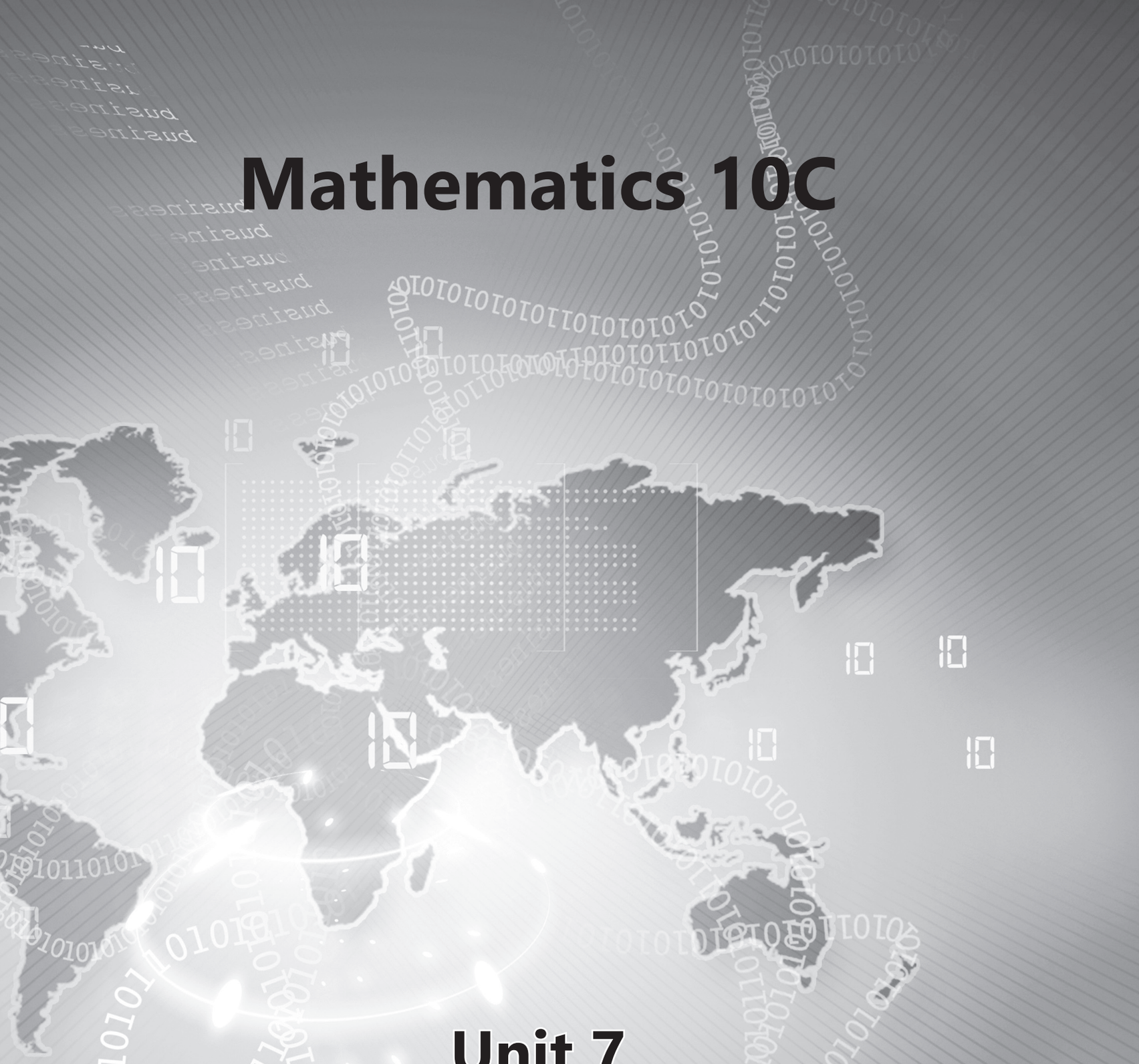
Mathematics 10C



Unit 7
Final Review Workbook
Equations and Graphs of Linear Relations

Unit 7: Equations and Graphs of Linear Relations Final Review Assignment

Final Review Assignment

(2) 1. Explain why the equation $y = 5x$ is a special case of the slope-intercept form. What are the slope and y-intercept of the line represented in this equation?

(3) 2. A linear relation passes through the points $(-40, 19)$ and $(24, 91)$. Determine equations for the relation in slope-intercept form, general form, and slope-point form.

(1) 3. Explain why the intercepts, on their own, cannot be used to graph the relation $5x + 9y = 0$.

4. Summarize a strategy that can be used to graph each of the following.

(1) a. $y = mx + b$

(1) b. $Ax + By + C = 0$

(1) c. $y - y_1 = m(x - x_1)$

(1) d. $Py + 1 = Qx$

(1) e. A linear relation using technology

(1) 5. State the domain and range of $y = 6$.

6. The equation of line A is $3x + 6y - 1 = 0$. Give the equation of a line that passes through the point (5, 1) that is

(1) a. perpendicular to line A

(1) b. parallel to line A

7. A restaurant is holding an 'all you can eat' ribs event. The initial serving of the meal includes a half slab of ribs, a loaded baked potato, roasted garlic green beans, and a 750 mL soft drink. A customer can order as many additional quarter slabs of ribs as they want at no additional cost. The following table shows the number of Calories in each menu item.

Menu Item	Calories
half slab of ribs	613
quarter slab of ribs	328
loaded baked potato	532
roasted garlic green beans	298
750 mL soft drink	295

(1) a. Suppose a person ate the entire meal, but did not order any additional ribs. How many calories did that person consume?

(1) b. Let C represent the number of calories consumed, and let Q represent the number of additional quarter slabs of ribs ordered. Write a linear equation relating C and Q.

(1) c. Sketch a graph of the related linear relation.

(1) d. What do the slope and C-intercept represent in this scenario?

(1) e. The Canada Food Guide suggests that a 16-year-old male with a sedentary lifestyle should consume about 2 300 calories per day. Use the linear equation to determine the number of additional quarter slabs a 16-year-old male could eat and still stay below the daily recommendation (assuming the male does not eat anything else that day)?

(1) f. Use the recommended caloric intake to state the domain and range of the relation from part e.

(2) 8. Eliana claims she has discovered a method for determining the general form equation of a line that is perpendicular to a given line. Eliana's method is described below.

The line $Ax + By + C = 0$ will always be perpendicular to the line $Bx - Ay + C = 0$.

Is Eliana's method reasonable? Explain why or why not?

/22

Unit 7: Equations and Graphs of Linear Relations

Unit Checkpoint

Use the *Check Point* to check and reflect before completing the *Test Your Understanding Quiz* for *Unit 7: Equations and Graphs of Linear Relations*.

I understand how to:

	Place a checkmark in the appropriate column		
	Yes	**No**	**Maybe**
Determine the intercepts of the graph of linear relation			
Determine the slope of the graph of a linear relation			
Determine the domain and range of a linear relation			
Sketch a linear relation that has one, two or an infinite number of intercepts			
Identify a graph that corresponds to a given slope and *y*-intercept			
Identify the slope and *y*-intercept that correspond to a given graph			
Solve problems using the intercepts, slope, domain or range of linear relation			
Express linear relations in slope-intercept, general, and slope-point forms			
Rewrite a linear relation in slope-intercept or general form			
Explain how to graph relations in slope-intercept or general form			
Graph linear relations with and without technology			
Identify equivalent linear relations			
Match linear relations to their graphs			
Write the equation of a graph in slope-intercept form			
Determine the equation of a linear relation using the slope and a point			
Determine the equation of a linear relation using two points			
Use slope to determine whether lines are parallel or perpendicular			

***Unit 7* Concepts**	Place a checkmark in the appropriate column		
	Yes	**No**	**Maybe**
Determine the equation of a linear relation using a point on the line and the equation of a parallel or perpendicular line			
Graph a linear relation from a context, and write the equation of the line			
Solve problems using a linear relations			

If you have any concerns from the *Check Point*, please refer to *Enhance Your Understanding* in the *Module* for designated practice questions and their solutions to help you improve your skills.

Contact your teacher for assistance and clarification as needed.

You have completed the *Lessons* and *Workbooks* for *Unit 7: Equations and Graphs of Linear Relations*. Please review all work in *Unit 7 Final Review Workbook* to ensure it is your best work. Submit *Unit 7 Final Review Workbook* for marking at this time and continue your training with the next unit, *Unit 8: Systems of Linear Equations*.

Complete the *Test Your Understanding Quiz* when you have reviewed the feedback provided by your marker for *Workbooks 7.1, 7.2, 7.3, 7.4,* and *Unit 7 Final Review*.

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