ALBERTA DISTANCE LEARNING CENTRE
Mathematics 10C
MAT1791
Unit 5 Final Review Workbook

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Summary

	Marks Earned	Total Possible Marks	Percent
Unit 5 Final Review Assignment		24	

Teacher's Comments:

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Teacher's Signature

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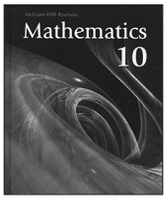

Mathematics 10

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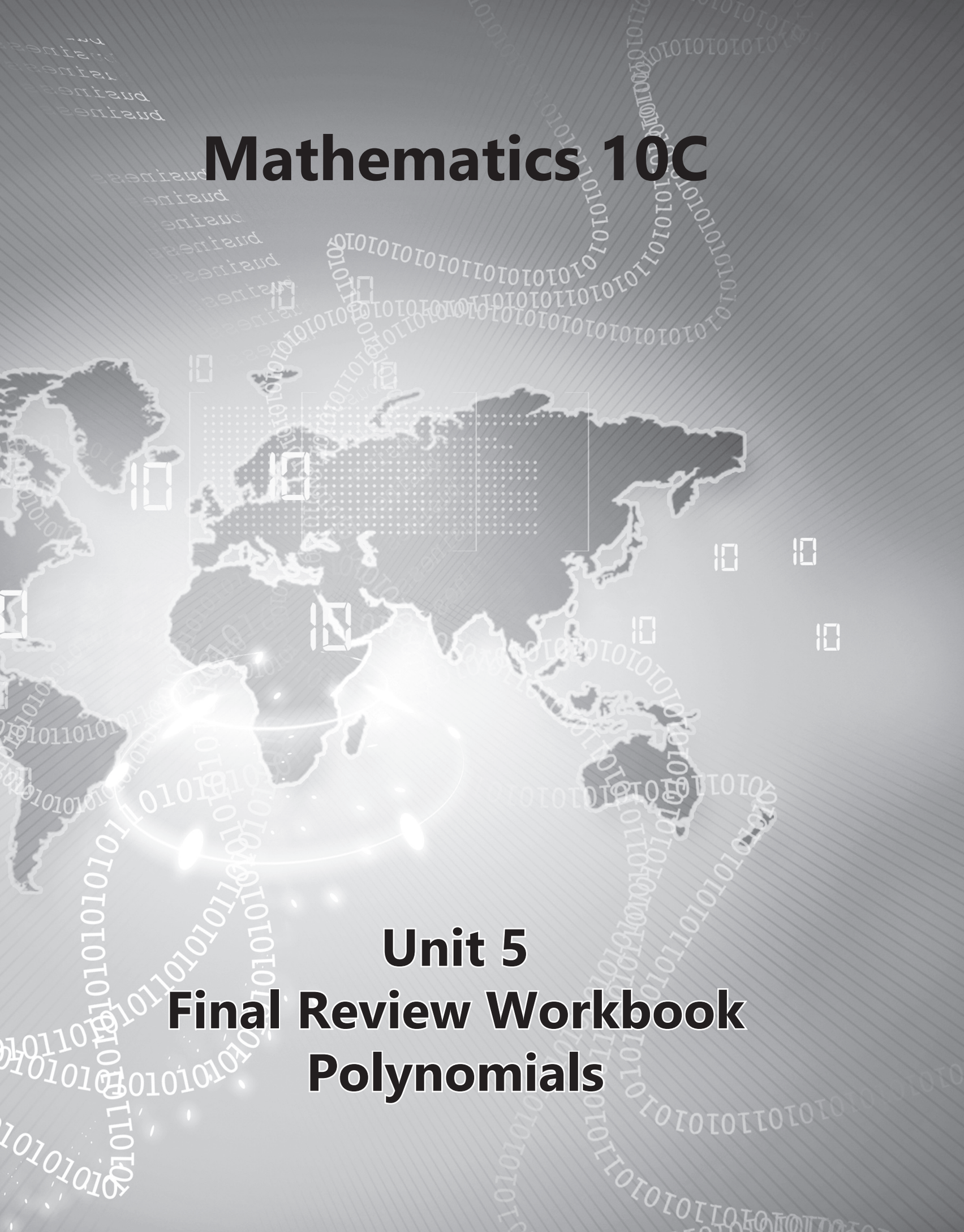
Mathematics 10C



Unit 5
Final Review Workbook
Polynomials

Unit 5: Polynomials Final Review Assignment

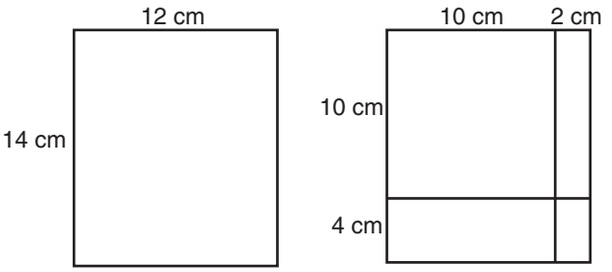
Final Review Assignment

1. Multiply the following binomials. Simplify where possible.

(2) a. $(3-x)(12-x)$

(2) b. $(9ab-6b)(14b+3a)$

2. To determine the area of a rectangle, one strategy is to split the rectangle into smaller pieces, as shown, and determine the smaller areas first.



(1) a. Use this strategy to determine the area of the large rectangle.

(1) b. Explain how this strategy relates to binomial multiplication.

(1) 3. *Lesson 5.1* focused on multiplying two **binomials**. Explain a strategy that can be used to multiply any two **polynomials**.

4. Completely factor each of the following expressions.

(2) a. $12r - 3r^2$

(2) b. $81 - n^2$

(2) c. $x^2 + 4x - 45$

(2) d. $4x^2 + 24x + 36$

(2) e. $3x^2 + 5xy - 2y^2$

5. Ian factored $12x^3y^3 - 24x^2y^3$ into $6xy(2x^2y^2 - 4xy^2)$.

(1) a. Verify that Ian's factorization is correct, using multiplication.

(1) b. Ian's factorization is not considered 'complete'. Explain why.

(1) c. Show the complete factorization of $12x^3y^3 - 24x^2y^3$.

(2) 6. The area of a rectangle is $2x^2 - 7x - 15$. Determine binomials that represent the length and width of this rectangle.

7. Huan claims that the difference of squares method of factoring can be used even when the values aren't perfect squares. An example of his thinking is shown.

$x^2 - 5 = (x - \sqrt{5})(x + \sqrt{5})$

(1) a. Verify that Huan's factorization is correct, using binomial multiplication.

(1) b. Use Huan's strategy to factor $10 - 3x^2$.

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Unit 5: Polynomials

Unit Checkpoint

Use the *Check Point* to check and reflect before completing the *Test Your Understanding Quiz* for *Unit 5: Polynomials*.

I understand how to:

***Unit 5* Concepts**	Place a checkmark in the appropriate column		
	Yes	**No**	**Maybe**
Model the multiplication of two binomials using pictures or algebra tiles, and record the process symbolically			
Explain how binomial multiplication is related to area			
Explain the relationship between binomial multiplication and multiplying two-digit numbers			
Verify polynomial multiplication using substitution			
Multiply two polynomials and combine like terms in the product			
Explain how to multiply any two polynomials			
Correct errors in a polynomial multiplication			
Factor a polynomial using the GCF of its terms			
Model the factoring of a trinomial using pictures or algebra tiles, and record the process symbolically			
Factor a polynomial that is a difference of squares			
Identify and correct errors in a polynomial factorization			
Factor a polynomial, and verify by multiplying the factors			
Use examples to show the relationship between multiplying and factoring polynomials			
Generalize and explain strategies used to factor a trinomial			
Express a polynomial as a product of its factors			

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 5: Polynomials*. Please review all work in *Unit 5 Final Review Workbook* to ensure it is your best work. Submit *Unit 5 Final Review Workbook* for marking at this time and continue your training with the next unit, *Unit 6: Relations and Functions*.

Complete the *Test Your Understanding Quiz* when you have reviewed the feedback provided by your marker for *Workbooks 5.1, 5.2, 5.3, 5.4, and Unit 5 Final Review.*

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