

Grade 10 Consumer Mathematics (1998)	Essential Mathematics (2008)
Solve problems using a variety of non-algebraic approaches (A1-1) Solve problems using a variety of non-algebraic approaches (A2-1)	10E1.A.1. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. [C, CN, PS, R] 10E2.A.1. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. [C, CN, PS, R]
Demonstrate the use of an appropriate strategy in solving puzzles and playing games involving patterns (B1-1) Demonstrate the use of an appropriate strategy in solving puzzles and playing games involving patterns (B2-1)	10E1.A.1. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. [C, CN, PS, R] 10E2.A.1. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. [C, CN, PS, R]
Demonstrate how numbers are used descriptively throughout society (B1-2) Demonstrate how numbers are used descriptively throughout society (B2-2)	
Calculate hours worked and gross pay (C1-1)	10E1.P.1. Demonstrate an understanding of calculations for gross pay and net pay earned through income sources including <ul style="list-style-type: none"> • wages • salary • contracts • commissions • piecework [C, CN, R, T] 10E1.P.2. Solve problems that require the manipulation and application of formulas related to income. [C, CN, ME, PS, R]
Calculate net income using deduction tables (focus on weekly) and recognize different types of pay periods (C1-2)	10E1.P.1. Demonstrate an understanding of calculations for gross pay and net pay earned through income sources including <ul style="list-style-type: none"> • wages • salary • contracts • commissions • piecework [C, CN, R, T] 10E1.P.2. Solve problems that require the manipulation and application of formulas related to income. [C, CN, ME, PS, R]

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Calculate penalties for lateness and then find gross and net incomes (C1-3)	10E1.P.1. Demonstrate an understanding of calculations for gross pay and net pay earned through income sources including <ul style="list-style-type: none"> • wages • salary • contracts • commissions • piecework [C, CN, R, T] 10E1.P.2. Solve problems that require the manipulation and application of formulas related to income. [C, CN, ME, PS, R]
Calculate changes in income (C1-4)	10E1.P.1. Demonstrate an understanding of calculations for gross pay and net pay earned through income sources including <ul style="list-style-type: none"> • wages • salary • contracts • commissions • piecework [C, CN, R, T] 10E1.P.2. Solve problems that require the manipulation and application of formulas related to income. [C, CN, ME, PS, R]
Create a spreadsheet using different formatting options (D1-1)	
Use a spreadsheet template to solve problems (D1-2)	
Create a spreadsheet using formulas and functions (D1-3)	
Use a spreadsheet to answer “what if” questions (D1-4)	
Apply ratio and proportion in similar triangles (E1-1)	10E2.TG.2. Demonstrate an understanding of primary trigonometric ratios (sine, cosine, tangent) by <ul style="list-style-type: none"> • applying similarity to right triangles • generalizing patterns from similar right triangles • solving problems [CN, PS, R, T, V]

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Use the trigonometric ratios sine, cosine and tangent in solving right triangles (E1-2)	10E2.TG.2. Demonstrate an understanding of primary trigonometric ratios (sine, cosine, tangent) by <ul style="list-style-type: none"> • applying similarity to right triangles • generalizing patterns from similar right triangles • solving problems [CN, PS, R, T, V] 10E2.TG.3. Solve problems that require the manipulation and application of formulas related to <ul style="list-style-type: none"> • the Pythagorean theorem • primary trigonometric ratios [C, CN, ME, PS, R]
Extension: Solve problems involving two right triangles	10E2.TG.2. Demonstrate an understanding of primary trigonometric ratios (sine, cosine, tangent) by <ul style="list-style-type: none"> • applying similarity to right triangles • generalizing patterns from similar right triangles • solving problems [CN, PS, R, T, V]
Sketch 90°, 180°, and 270° clockwise rotations for 2-dimensional figures (F1-1)	10E2.TF.1. Demonstrate an understanding of transformations on a 2-D shape, including <ul style="list-style-type: none"> • translations • rotations • reflections • dilations [C, CN, R, T, V]
Sketch the reflections of 2-dimensional figures over vertical, horizontal, left diagonal and right diagonal lines of reflection (F1-2)	10E2.TF.1. Demonstrate an understanding of transformations on a 2-D shape, including <ul style="list-style-type: none"> • translations • rotations • reflections • dilations [C, CN, R, T, V]
Draw top, front, and side views for both 3-dimensional rod/block objects and their sketches (F1-3)	
Sketch 3-dimensional rod/block objects using isometric paper (F1-4)	
Determine the best buy on a consumer item and justify the decision (C2-1)	10E2.C.1. Solve problems that involve unit pricing and currency exchange, using proportional reasoning. [CN, ME, PS, R]
Solve problems on the application of sales taxes in Canada (C2-2)	
Describe a variety of sales promotion techniques and their financial implications for the consumer (C2-3)	10E2.C.1. Solve problems that involve unit pricing and currency exchange, using proportional reasoning. [CN, ME, PS, R]

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Measure the length of figures and objects using both SI metric units (mm, cm, m) and imperial units (inches, feet, yards) (D2-1)	10E1.M.1. Demonstrate an understanding of the Système International (SI) by describing the relationships of the units for length, area, volume, capacity, and mass. [C, CN, ME, V] 10E1.M.2. Demonstrate an understanding of the imperial system by <ul style="list-style-type: none"> • describing the relationships of the units for length, area, volume, capacity, and mass • comparing American and British imperial units for capacity • applying strategies to convert between imperial units and SI units [C, CN, ME, V] 10E1.M.3. Solve and verify problems that involve SI and imperial linear measurements, including decimal and fractional measurements. [CN, ME, PS, V] 10E1.M.4. Solve problems that require the manipulation and application of formulas related to converting measurement. [C, CN, ME, PS, R]
Determine the relationships among linear scale factors, area, surface areas, and volumes of similar figures and objects (D2-2)	
Enlarge or reduce a dimensioned object according to a specified scale (D2-3)	
Solve problems involving linear dimensions, area, and volume (D2-4)	10E1.M.3. Solve and verify problems that involve SI and imperial linear measurements, including decimal and fractional measurements. [CN, ME, PS, V] 10E1.M.4. Solve problems that require the manipulation and application of formulas related to converting measurement. [C, CN, ME, PS, R]
Interpret drawings and use the information to solve problems (D2-5)	
Name and describe various types of consumer bank accounts (E2-1)	
Complete various banking forms (E2-2)	
Describe the use of a bank card for automated teller machines (ATMs) and debit payments (E2-3)	
Identify different types of bank service charges and their relative costs (E2-4)	
Update a chequebook record and bank statement to reconcile an account (E2-5)	
Estimate population sizes through a variety of sampling methods (F2-1)	
Use sample data to make decisions (F2-2)	
Apply probability and sampling techniques to real-life situations (F2-3)	

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	10E1.G.1. Solve problems that involve SI and imperial area measurements of regular, composite, and irregular 2-D shapes, including decimal and fractional measurements. [ME, PS, R, V] 10E1.G.2. Solve problems that require the manipulation and application of formulas related to: <ul style="list-style-type: none"> • perimeter • area [C, CN, ME, PS, R]
	10E2.TG.1. Solve problems involving right triangles using the Pythagorean theorem. [C, CN, PS, V]
	10E2.AC.1. Demonstrate an understanding of angles, including acute, right, obtuse, straight, and reflex, by <ul style="list-style-type: none"> • drawing • replicating and constructing • bisecting • solving problems [C, ME, PS, T, V]
	10E2.AC.2. Solve problems that involve parallel, perpendicular, and transversal lines, and pairs of angles formed between them. [C, CN, PS, V]