MATHEMATICS 10C A

Mr. M Cherney

COURSE OUTLINE   2024-2025 A

Ch 1 Measurement	11(11 1st)-11 Classes-Lessons	11 School Days	Sept 3 – Sept 17
Ch 2 Trigonometry	11(13 FR)-11 Classes-Lessons	11(13) School Days	Sept 18 – Oct 8
Ch 3 Polynomials	11-11 Classes-Lessons	11 School Days	Oct 9 – Oct 24
Ch 4 Roots and Powers	9-9 Classes-Lessons	9 School Days	Oct 28 – Nov 7
Ch 5 Relations and Functions	11-11 Classes-Lessons	11 School Days	Nov 8 – Nov 25
Ch 6 Linear Functions	9-9 Classes-Lessons	9 School Days	Nov 26 – Dec 9
Ch 7 Linear Systems	8(9 TAL)-8 Classes-Lessons	8(9) School Days	Dec 10 – Dec 20
Course Review	7-10 Classes-Lessons	7 School Days	Jan 6 – Jan 14
In Class Final Written Response	3-3 Classes-Lessons	3 School Days	Jan 15 – Jan 17
	83(87) Classes-Lessons	80(83) School Days	

Final

Final Exam   Jan 20 – 27

COURSE MARKING   2024-2025 A

Heading	Date	Weight	Points Earned (%)	Percent (%)
Course Work		80		
Tests		90		
Ch 1 Measurement		15		
Ch 2 Trigonometry		15		
Ch 3 Polynomials		15		
Ch 4 Roots and Powers		10		
Ch 5 Relations and Functions		15		
Ch 6 Linear Functions		15		
Ch 7 Linear Systems		15		
Homework		10		
Final Exam		20		
Final Grade				

Daily Homework for each assignment is due the day after it is assigned. It will be marked for completeness, 1 mark for each completed question out of the total assigned questions. Each question number of your work is to be highlighted once (**not** abc parts) with a marker. Each assignment is to have your Name, Date, and Assignment Label and to be clearly marked as correct or incorrect (and corrected). Notes will be collected and marked at time of the tests.

Review Quizzes are given twice per chapter or when necessary, as review. Each quiz will have about 5-10 questions.

Review Summary Sheets are given for each chapter and can be used as 'I Can' statements to self assess learning or as review sheets for content covered in the chapter.

Tests may be rewritten on any chapter up to four times at any time during the semester before the beginning of the Course Review at the end of the semester. Your best score up to 79% will be taken on rewrites. Before any test is rewritten all previous tests from other chapters must be complete and at least some homework from the rewritten chapter must be handed in.

Extra Help or a quiet place to work is available during any lunch hour in my room through out the year on a come and go as you need help basis.

Web Sites that may be of help
        Exam bank: http://alberta.exambank.com/
                Username: pal.hca
                Password:
        Pure math 30: http://www.bmlc.ca/PureMath30.html
        Kahn Academy: http://www.khanacademy.org/

MATHEMATICS 10C FORMULA SHEET

Graphing Calculator Window Format $\quad x[x_{\min}, x_{\max}, x_{scl}] \qquad y[y_{\min}, y_{\max}, y_{scl}]$

Conversion Tables

Imperial

1 inch = 1"=1 in
1 foot = 1'=1 ft
1 yard = 1 yd
1 mile = 1 mi

1 ft = 12 in
1 yd = 3 ft = 36 in
1 mi = 1760 yd = 5280 ft

Metric

1 millimetre = 1 mm
1 centimetre = 1 cm
1 metre = 1 m
1 kilometre = 1 km

1 cm = 10 mm
1 m = 100 cm = 1000 mm
1 km = 1000 m

Cross Over

1 in = 2.54 cm
1 ft = 30 cm = 0.3 m
1 yd = 91.44 cm = 0.9144 m
1 mi = 1.6 km

1 mm = 4/100 in = 0.04 in
1 cm = 4/10 in = 0.4 in
1 m = 39 in = 3 ¼ ft = 3.25 ft
1 km = 0.6 mi

Surface Area

Prisms	$SA = A_L + B + B$
Pyramids	$SA = A_L + B$
Regular Pyramids and Cones	$SA = \frac{1}{2}(s)(P) + B$
Cones	$SA = \pi r s + \pi r^2$
Cylinders	$SA = 2\pi r h + 2\pi r^2$
Spheres	$SA = 4\pi r^2$
Hemispheres	$SA = 3\pi r^2$

Volume

Prisms	$V = Bh$
Pyramids	$V = \frac{1}{3}Bh$
Cones	$V = \frac{1}{3}\pi r^2 h$
Cylinders	$V = \pi r^2 h$
Spheres	$V = \frac{4}{3}\pi r^3$
Hemispheres	$V = \frac{2}{3}\pi r^3$

Trigonometry

SOH CAH TOA

$$\sin A = \frac{opp}{hyp} \qquad \cos A = \frac{adj}{hyp} \qquad \tan A = \frac{opp}{adj}$$

Pythagoras

$$c^2 = a^2 + b^2$$

Angle Sum

$$\angle A + \angle B + \angle C = 180°$$

Polynomials

Factoring
 Prime Factorization
 Common Factor
 Product Sum Factoring
 Factor by Grouping (Decomposition)
 Perfect Trinomial Squares
 Difference of Squares

Expanding
 Distributive Property
 FOIL
 Binomial Squares
 Conjugates

Radicals and Powers

$$x^a \times x^b = x^{a+b}$$

$$x^a \div x^b = x^{a-b}$$

$$x^{-a} = \frac{1}{x^a} \quad \text{or} \quad \left(\frac{x}{y}\right)^{-a} = \left(\frac{y}{x}\right)^{a}, \quad x, y \neq 0$$

$$x^a \div x^a = x^{a-a} = x^0 = 1, \qquad x \neq 0$$

$$(xy)^a = x^a y^a$$

$$\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}, \qquad\qquad y \neq 0$$

$$\left(x^a\right)^b = x^{ab}$$

$$x^{\frac{a}{b}} = \left(\sqrt[b]{x}\right)^a = \sqrt[b]{x^a} = x^{a \times \frac{1}{b}}$$

Linear Relations

$$m = \frac{rise}{run} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

Linear Functions

Slope Intercept Form

$$y = mx + b$$

Slope Point Form

$$y - y_1 = m(x - x_1)$$

Two Point Form

$$y - y_1 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1)$$

Two Intercept Form

$$\frac{x}{a} + \frac{y}{b} = 1$$

General Form

$$Ax + By + C = 0$$

Standard Form

$$Ax + By = -C$$