MATHEMATICS 10C B

Mr. M Cherney

COURSE OUTLINE 2023-2024 B

Ch 1 Measurement	12(15 1st/FR)-11 Classes-Lessons	12(15) School Days	Sept 5 – Sept 26
Ch 2 Trigonometry	11-11 Classes-Lessons	11 School Days	Sept 27 – Oct 12
Ch 3 Polynomials	11-11 Classes-Lessons	11 School Days	Oct 13 – Oct 30
Ch 4 Roots and Powers	9-9 Classes-Lessons	9 School Days	Oct 31 – Nov 10
Ch 5 Relations and Functions	11-11 Classes-Lessons	11 School Days	Nov 14 – Nov 28
Ch 6 Linear Functions	9-9 Classes-Lessons	9 School Days	Nov 29 – Dec 12
Ch 7 Linear Systems	8(9 TAL)-8 Classes-Lessons	8(9) School Days	Dec 13 – Jan 9
Course Review	7-10 Classes-Lessons	7 School Days	Jan 10 – Jan 18
In Class Final Written Response	3-3 Classes-Lessons	3 School Days	Jan 19 – Jan 23
	81(85) Classes-Lessons	81(85) School Days	

Final

Final Exam	Jan 24 – 29

COURSE MARKING 2023-2024 B

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 $x[x_{\min}, x_{\max}, x_{scl}]$ $y[y_{\min}, y_{\max}, y_{scl}]$

Conversion Tables

Imperial	*Metric*
1 inch = 1”=1 in	1 millimetre = 1 mm
1 foot = 1’=1 ft	1 centimetre = 1 cm
1 yard = 1 yd	1 metre = 1 m
1 mile = 1 mi	1 kilometre = 1 km
1 ft = 12 in	1 cm = 10 mm
1 yd = 3 ft = 36 in	1 m = 100 cm = 1000 mm
1 mi = 1760 yd = 5280 ft	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 $SA = \pi rs + \pi r^2$

Cylinders $SA = 2\pi rh + 2\pi r^2$

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

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

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

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

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

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

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

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

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

$$(x^a)^b = x^{ab}$$

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

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

$$Ax + By = -C$$