



Grade 12 General Stream Scheme of Work, Term 2, Academic Year 2022-2023

Purpose

- to define the **required** General Stream Mathematics Student Learning Outcomes to be covered during the term for this grade
- to **recommend** the pace at which the Student Learning Outcomes are to be covered. The term's content is broken down into nine teaching weeks, allowing the coverage of topics within each week to be flexible.

Assessment

- Assessment details for Term 2 will be communicated separately.

Teachers should incorporate the Standards for Mathematical Practice (SMPs) in their instruction when and where appropriate. The Standards for Mathematical Practice are

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Why are the Standards for Mathematical Practice important?

The Standards for Mathematical Practice set expectations for using mathematical language and representations to reason, solve problems, and model in preparation for careers and a wide range of college majors.

Week 1: Jan. 2 – Jan. 6, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
<p align="center">know your students, establish classroom routines, and finalize class lists. It is also an opportunity to review prerequisite concepts and skills which students will need for Grade 12 and to administer teacher-created diagnostics</p>				
Chapter 6	أنظمة المعادلات والمصفوفات Systems of Equations and Matrices	Lesson 1	الأنظمة الخطية متعددة المتغيرات وعمليات الصف الأولية (البسيطة) Multivariable Linear Systems and Row Operations	<ol style="list-style-type: none"> 1. Solve systems of linear equations using matrices and Gaussian elimination. 2. Solve systems of linear equations using matrices and Gauss -Jordan elimination.
Chapter 6	أنظمة المعادلات والمصفوفات Systems of Equations and Matrices	Lesson 2	ضرب المصفوفات والمعكوسات والمحددات Matrix Multiplication, Inverses, and Determinants	<ol style="list-style-type: none"> 1. Multiply matrices. 2. Find determinants and inverses of 2×2 and 3×3 matrices.

Week 2: Jan. 9 – 13, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 6	أنظمة المعادلات والمصفوفات Systems of Equations and Matrices	Lesson 3	حل الأنظمة الخطية باستخدام المعكوسات وقاعدة كرامر Solving Linear Systems using Inverses and Cramer's Rule	<ol style="list-style-type: none"> 1. Solve systems of linear equations using inverse matrices. 2. Solve systems of linear equations using Cramer's Rule.

Chapter 6	أنظمة المعادلات والمصفوفات Systems of Equations and Matrices	Lesson 4	نمذجة الحركة باستخدام المصفوفات Modeling Motion with Matrices	1. Use matrices to determine the coordinates of polygons under a given transformations.
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Week 3: Jan. 16 – 20, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 7	القطع المخروطية والمعادلات الوسيطة Conic Sections and Parametric Equations	Lesson 1	صيغتا نقطة المنتصف والمسافة Midpoint and Distance Formulas	1. Find the midpoint of a segment on the coordinate plane. 2. Find the distance between two points on the coordinate plane.
Chapter 7	القطع المخروطية والمعادلات الوسيطة Conic Sections and Parametric Equations	Lesson 2	القطع المكافئ Parabolas	1. Write equations of parabolas in standard form. 2. Graph parabolas.

Week 4: Jan. 23 – 27, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
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Chapter 7	القطع المخروطية والمعادلات الوسيطية Conic Sections and Parametric Equations	Lesson 3	الدوائر Circles	1. Write equations of circles. 2. Graph circles.
Chapter 7	القطع المخروطية والمعادلات الوسيطية Conic Sections and Parametric Equations	Lesson 4	القطع الناقص Ellipses	1. Write equations of ellipses. 2. Graph ellipses.

Week 5: Jan. 30 – Feb. 3, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 7	القطع المخروطية والمعادلات الوسيطية Conic Sections and Parametric Equations	Lesson 5	القطع الزائد Hyperbolas	1. Write equations of hyperbolas. 2. Graph hyperbolas.
Chapter 7	القطع المخروطية والمعادلات الوسيطية Conic Sections and Parametric Equations	Lesson 6	تحديد القطوع المخروطية Identifying Conic Sections	1. Write equations of conic sections in standard form. 2. Identify conic sections from their equations.

Week 6: Feb. 7 – 11, 2022

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 7	القطع المخروطية والمعادلات الوسيطة Conic Sections and Parametric Equations	Lesson 7	حل الأنظمة الخطية واللاخطية Solving Linear and Nonlinear Systems	1. Solve systems of linear and nonlinear equations algebraically and graphically. 2. Solve systems of linear and nonlinear inequalities graphically.
Chapter 7	القطع المخروطية والمعادلات الوسيطة Conic Sections and Parametric Equations	Lesson 8	المعادلات الوسيطة Parametric Equations	1. Represent and operate with vectors in the coordinate plane. 2. Write a vector as a linear combination of unit vectors.

Week 7: Feb. 13 – 17, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 8	المتجهات Vectors	Lesson 1	مقدمة في المتجهات Introduction to Vectors	1. Represent and operate with vectors geometrically. 2. Solve vector problems and resolve vectors into their rectangular components.
Chapter 8	المتجهات Vectors	Lesson 2	المتجهات في المستوى الاحداثي Vectors in the Coordinate Plane	1. Represent and operate with vectors in the coordinate plane. 2. Write a vector as a linear combination of unit vectors.

Week 8: Feb. 20 – 24, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 8	المتجهات Vectors	Lesson 3	الضرب النقطي ومساقط المتجهات Dot Products and Vector Projection	<ol style="list-style-type: none"> 1. Find the dot product of two vectors and use the dot product to find the angle between them. 2. Find the projection of one vector onto another.
Chapter 8	المتجهات Vectors	Lesson 4	المتجهات في الفضاء ثلاثي الأبعاد Vectos in Three Dimensional Space	<ol style="list-style-type: none"> 1. Plot points and vectors in the three -dimensional coordinate system. 2. Express algebraically and operate with vectors in space.

Week 9: Feb. 27 – Mar. 3, 2023

CHAP NBR	CHAP TITLE	LESSON NBR	LESSON TITLE	Slo.EN
Chapter 8	المتجهات Vectors	Lesson 5	الضرب النقطي والضرب المتجهي في الفضاء Dot and Cross Products of Vectors in Space	<ol style="list-style-type: none"> 1. Find dot products of and angles between vectors in space. 2. Find cross products of vectors in space, and use cross products to find area and volume.
Chapter 8	المتجهات Vectors	Lesson 6	مصفوفات التحويلات في الفضاء ثلاثي الأبعاد Transformation Matrices in Three Dimensional Space	<ol style="list-style-type: none"> 1. Transform three -dimensional figures using matrix operations to describe the transformation.

Week 10: March 6 –10, 2023

Week 11: March 13 –17, 2023

Week 12: March 20 –24, 2023

Term 2 Revision/EOT Exams