



آغا خان یونیورسٹی ایگزامینیشن بورڈ  
AGA KHAN UNIVERSITY EXAMINATION BOARD

## Teaching and Learning Resources for Grade IX General Mathematics

### Recommended Key Textbook:

*General Mathematics 9*, Ali Brotheran, Lahore

Additional Recommended Resource Material				
Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Reference Website
1.	Percentage, Ratio and Proportion	New Syllabus Mathematics, Book 1 (6 <sup>th</sup> edition)	Chapter 10 and 11	<a href="https://www.mathplanet.com/education/pre-algebra/ratios-and-percent">https://www.mathplanet.com/education/pre-algebra/ratios-and-percent</a>
2.	<i>Zakat, Ushr</i> and Inheritance	Math wise 7	Chapter 6	<a href="http://www.sabaq.pk/chapter-page.php?vg=punjab-general%20math-9th&amp;vsg=punjab-general%20math-9th-2">http://www.sabaq.pk/chapter-page.php?vg=punjab-general%20math-9th&amp;vsg=punjab-general%20math-9th-2</a>
3.	Business Mathematics	Count Down 6 and 7		<a href="https://wordpandit.com/profit-and-loss-concepts/">https://wordpandit.com/profit-and-loss-concepts/</a>
		New Syllabus Mathematics, Book 1 (6 <sup>th</sup> edition)	Chapter 11	

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Reference Website
4.	Sets and Functions	Mathematics for IX, Punjab Text Book Board	Chapter 1	<a href="http://www.math.fsu.edu/~pkirby/mad2104/SlideShow/sl_1.pdf">http://www.math.fsu.edu/~pkirby/mad2104/SlideShow/sl_1.pdf</a>
		New Additional Mathematics, Ho Soo Thong and Khor Nyak Hiong	Chapter 1	<a href="https://www.mathsisfun.com/sets/sets-introduction.html">https://www.mathsisfun.com/sets/sets-introduction.html</a>
		Mathematics 10, Ilmi kitab khana	Chapter 5	<a href="http://www.mathcity.org/matric/9th_science/unit_02">http://www.mathcity.org/matric/9th_science/unit_02</a>
		New Secondary Mathematics, Class VIII, Mohsin Ali	Chapter 1	
	4.5 Binary Relation 4.6 Functions	Mathematics 11, Algebra and Trigonometry, Punjab Text Book Board	Chapter 1	<a href="http://www.math-only-math.com/relation-in-math.html">http://www.math-only-math.com/relation-in-math.html</a> <a href="http://www.math-only-math.com/functions-or-mapping.html">http://www.math-only-math.com/functions-or-mapping.html</a>

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Reference Website
5.	Exponents and Logarithms	New Additional Mathematics, Ho Soo Thong and Khor Nyak Hiong	Chapter 3	<a href="https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/introduction-to-logarithms/v/logarithms">https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/introduction-to-logarithms/v/logarithms</a> <a href="http://www.purplemath.com/modules/logs.htm">http://www.purplemath.com/modules/logs.htm</a> <a href="https://www.mathsisfun.com/algebra/logarithms.html">https://www.mathsisfun.com/algebra/logarithms.html</a>
6.	Algebraic Formulae and Application	Mathematics IX, Caravan Book House Lahore	Chapter 4	<a href="http://www.purplemath.com/modules/index.htm">http://www.purplemath.com/modules/index.htm</a>
		Mathematics IX and X, Sindh Text Book Board	Chapter 3	
		New Syllabus Mathematics, Book 2 (6 <sup>th</sup> edition)	Chapter 4	
7.	Factorisation	Mathematics IX, Caravan Book House Lahore	Unit 5	<a href="http://www.purplemath.com/modules/index.htm">http://www.purplemath.com/modules/index.htm</a>
		Mathematics IX and X, Sindh Text Book Board	Chapter 4	
		New Syllabus Mathematics, Book 2 (6 <sup>th</sup> edition)	Chapter 3	

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Reference Website
8.	Linear Graphs	New Syllabus Mathematics, Book 2 ( 6 <sup>th</sup> Edition)	Chapter 8	<a href="https://www.mathsisfun.com/algebra/linear-equations.html">https://www.mathsisfun.com/algebra/linear-equations.html</a>
		Mathematics for IX, Caravan Publisher	Chapter 8	
9.	Matrices and Determinants	Mathematics for IX, Caravan Book House	Unit 1	<a href="http://www.mathsisfun.com/algebra/matrix-introduction.html">http://www.mathsisfun.com/algebra/matrix-introduction.html</a>
		Mathematics for IX, Sindh Text Book Board	Chapter 6	<a href="http://www.sosmath.com/matrix/matrix1/matrix1.html">http://www.sosmath.com/matrix/matrix1/matrix1.html</a>
		New Additional Mathematics, Ho Soo Thon and Khor Nyak Hiong	Chapter 6	<a href="http://www.maths.surrey.ac.uk/explore/emmaspages/option1.html">http://www.maths.surrey.ac.uk/explore/emmaspages/option1.html</a>
10.	Practical Geometry	Mathematics 09 (Science Group), Ilmi Kitab Khana	Chapter 17	<a href="https://www.youtube.com/watch?reload=9&amp;v=Pz64J1hJV8E">https://www.youtube.com/watch?reload=9&amp;v=Pz64J1hJV8E</a> <a href="http://bestmaths.net/online/index.php/year-levels/year-7/year-7-topics/construction-quadrilaterals/">http://bestmaths.net/online/index.php/year-levels/year-7/year-7-topics/construction-quadrilaterals/</a> <a href="https://www.teachmathematics.net/page/23093/constructing-quadrilaterals">https://www.teachmathematics.net/page/23093/constructing-quadrilaterals</a>

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Reference Website
		Mathematics 10 (Science Group ), Ilmi Kitab Khana	Chapter 13	<a href="#">GxwCCE&amp;list=RDNzcTKGxwCC E&amp;start_radio=1 (This is one link)</a>

**Note:** This resource list has been prepared primarily for teachers. While it can be shared with students, students should not be required to buy multiple books. Schools are encouraged to stock these books in the library. Moreover, these are only suggestions which have been compiled for the ease of teachers and students; schools are encouraged to use other resources for teaching and learning as well, as long as they are in line with the student learning outcomes (SLOs) mentioned in AKU-EB syllabi. Unless specified, AKU-EB does not endorse any of these books or websites.

In case any website is not functional for any reason, you may search material via Google or Yahoo search engines. If you have any query, you may contact us at [examination.board@aku.edu](mailto:examination.board@aku.edu)

This resource list is applicable for syllabi which will be assessed in 2020 onwards.



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## Teaching and Learning Resources for Grade X General Mathematics

### Recommended Key Textbook:

*General Mathematics 10*, Ali Brotheran, Lahore

Additional Recommended Resource Material				
Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
11.	Financial Mathematics	Maths Wise 8	Chapter 4	<a href="http://www.ipracticemath.com/learn/consumermath/simple-interest-intro">http://www.ipracticemath.com/learn/consumermath/simple-interest-intro</a> <a href="http://www.ask-math.com/solved-examples-on-simple-interest.html">http://www.ask-math.com/solved-examples-on-simple-interest.html</a> <a href="http://studymaths.co.uk/workout.php?workoutID=149">http://studymaths.co.uk/workout.php?workoutID=149</a>

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
12.	Consumer Mathematics	Get Ahead 8	Chapter 6	<a href="https://www.ipracticemath.com/learn/consumermath">https://www.ipracticemath.com/learn/consumermath</a> <a href="https://www.mathgoodies.com/lessons/percent/practice_unit10">https://www.mathgoodies.com/lessons/percent/practice_unit10</a>
13.	Basic Statistics	Shahid Jamal	Chapter 1, 2 and 3	<a href="http://www.math-only-math.com/real-life-statistics.html">http://www.math-only-math.com/real-life-statistics.html</a> <a href="http://www.mathsisfun.com/data/index.html">http://www.mathsisfun.com/data/index.html</a>
		New Syllabus Mathematics, Book 4 (6 <sup>th</sup> Edition)	Chapter 4 and 5	
		New Syllabus Mathematics, Book 2 (6 <sup>th</sup> Edition)	Chapter 11	
14.	Algebraic Manipulation	Mathematics IX, Caravan Book House Lahore	Chapter 6	<a href="http://www.purplemath.com/modules/index.htm">http://www.purplemath.com/modules/index.htm</a>
		Mathematics for IX and X, Sindh Textbook Board	Chapter 4	
15.	Linear Equations and Inequalities	Mathematics IX, Caravan Book House, Lahore	Chapter 7	<a href="http://www.purplemath.com/modules/ineqsolv.htm">http://www.purplemath.com/modules/ineqsolv.htm</a> <a href="http://www.purplemath.com/modules/solvelin.htm">http://www.purplemath.com/modules/solvelin.htm</a>
		New Syllabus Mathematics, Book 1 ( 6 <sup>th</sup> Edition)	Chapter 7	

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
16.	Quadratic Equations	New Mathematics Counts for Secondary Normal (Academic 3)	Chapter 5	<a href="http://www.purplemath.com/modules/solvquad.htm">http://www.purplemath.com/modules/solvquad.htm</a> <a href="http://www.math-only-math.com/methods-of-solving-quadratic-equations.html">http://www.math-only-math.com/methods-of-solving-quadratic-equations.html</a>
17.	Arithmetic and Geometric Sequences	Mathematics XI Sindh Board	Chapter 6	<a href="https://www.mathsisfun.com/algebra/sequences-sums-arithmetic.html">https://www.mathsisfun.com/algebra/sequences-sums-arithmetic.html</a> <a href="https://www.mathsisfun.com/algebra/sequences-sums-geometric.html">https://www.mathsisfun.com/algebra/sequences-sums-geometric.html</a>
		Mathematics XI (PTBB)	Chapter 6	
18.	Fundamentals of Geometry	New Mathematics Counts for Secondary Normal (Academic 3)	Chapter 7 and 8	<a href="https://www.mathsisfun.com/geometry/parallel-lines.html">https://www.mathsisfun.com/geometry/parallel-lines.html</a>



Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
	18.3 Congruent and Similar Triangles	Mathematics for IX, Caravan Book House	Unit 10	<a href="https://www.mathsisfun.com/geometry/triangles-congruent.html">https://www.mathsisfun.com/geometry/triangles-congruent.html</a>
		New Syllabus Mathematics, Book 2 (6 <sup>th</sup> edition)	Chapter 1	<a href="https://www.khanacademy.org/math/geometry/hs-geo-congruence/hs-geo-triangle-congruence/v/finding-congruent-triangles">https://www.khanacademy.org/math/geometry/hs-geo-congruence/hs-geo-triangle-congruence/v/finding-congruent-triangles</a> <a href="http://www.themathpage.com/atrig/ratio-and-proportion.htm#similar">http://www.themathpage.com/atrig/ratio-and-proportion.htm#similar</a>
	18.4 Quadrilaterals	New Syllabus Mathematics, Book 1 (6 <sup>th</sup> edition)	Chapter 15	<a href="http://www.mathplanet.com/education/geometry/quadrilaterals/properties-of-parallelograms">http://www.mathplanet.com/education/geometry/quadrilaterals/properties-of-parallelograms</a> <a href="http://www.bbc.co.uk/bitesize/ks3/maths/shape_space/2d_shapes/revision/2/">http://www.bbc.co.uk/bitesize/ks3/maths/shape_space/2d_shapes/revision/2/</a> <a href="https://www.mbacrystalball.com/blog/2015/11/13/quadrilaterals-properties-parallelograms-trapezium-rhombus/">https://www.mbacrystalball.com/blog/2015/11/13/quadrilaterals-properties-parallelograms-trapezium-rhombus/</a>

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
	18.5 Circle	New Syllabus Mathematics, Book 3 ( 6 <sup>th</sup> Edition)	Chapter 13	<a href="https://revisionmaths.com/gcse-maths-revision/shape-and-space/circle-theorems">https://revisionmaths.com/gcse-maths-revision/shape-and-space/circle-theorems</a> <a href="http://www.mathopenref.com/circleinscribed.html">http://www.mathopenref.com/circleinscribed.html</a> <a href="http://www.mathopenref.com/arccentralangletheorem.html">http://www.mathopenref.com/arccentralangletheorem.html</a>
19.	Areas and Volumes	New Secondary Mathematics, Class VIII, Mohsin Ali		<a href="http://www.cut-the-knot.org/pythagoras/index.shtml">http://www.cut-the-knot.org/pythagoras/index.shtml</a> <a href="https://www.mathsisfun.com/pythagoras.html">https://www.mathsisfun.com/pythagoras.html</a>
		New Syllabus Mathematics, Book 1 (6 <sup>th</sup> edition)	Chapter 8 and 9	<a href="https://www.mathopenref.com/area.html">https://www.mathopenref.com/area.html</a>
		New Syllabus Mathematics, Book 2 (6 <sup>th</sup> edition)	Chapter 6 and 7	<a href="https://www.mathopenref.com/volume.html">https://www.mathopenref.com/volume.html</a> <a href="https://www.mathopenref.com/cubevolume.html">https://www.mathopenref.com/cubevolume.html</a> <a href="https://www.mathopenref.com/cylindricalvolume.html">https://www.mathopenref.com/cylindricalvolume.html</a> <a href="https://www.mathopenref.com/conevolume.html">https://www.mathopenref.com/conevolume.html</a> <a href="https://www.mathopenref.com/sphericalvolume.html">https://www.mathopenref.com/sphericalvolume.html</a>

Topic No	Topic/ Sub-Topic	Reference Book	Chapters in the Reference Book	Website
20.	Introduction to Coordinate Geometry	New Mathematics Counts for Secondary Normal (Academic 3)	Chapter 3	<a href="http://www.mathopenref.com/coordintro.html">http://www.mathopenref.com/coordintro.html</a>
		New additional Mathematics, Ho Soo Thong and Khor Nyak Hiong Panpac Education Private Ltd.	Chapter 7	
		New Syllabus Mathematics, Book 3 ( 6 <sup>th</sup> Edition)	Chapter 4	

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