



## Teaching and Learning Resources for Grade XI Business Mathematics

### Recommended Key Textbook:

#### Business Mathematics for Grade XI

- Hakim, Hamid A. (2007-08). *Fundamentals of Business Mathematics*. Karachi: Meyari Matbooat.
- Siddiqui, Nadeem Akhter. (2007-08). *Business Mathematics*. Lahore: Azeem Academy.

### Additional Recommended Resource Material

Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
1.	Business Arithmetic	<i>Fundamentals of Business Mathematics</i> , Hamid A. Hakeem.	Chapter 1 & 2	<a href="https://www.mathsisfun.com/algebra/proportions.html">https://www.mathsisfun.com/algebra/proportions.html</a>
		<i>Business Mathematics</i> , Nadeem Akhter Siddiqui	Chapter 1	<a href="https://ideagalaxyteacher.com/proportions-activities/">https://ideagalaxyteacher.com/proportions-activities/</a>
		<i>Business Mathematics</i> , Shahid Jamal.	Chapter 2	<a href="https://www.youtube.com/watch?v=-cxJMsqHH1Y">https://www.youtube.com/watch?v=-cxJMsqHH1Y</a>
		<i>Business Mathematics</i> , Khursheed Alam.	Chapter 2	<a href="https://www.teachingideas.co.uk/subjects/percentages">https://www.teachingideas.co.uk/subjects/percentages</a>

### Additional Recommended Resource Material

Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
2.	Interest and Annuities	<i>Business Mathematics</i> , Mirza Mohammad Hasan, and Mohammad Ali Mirza, Farooq Kitab Gher	Topic 9 Mathematics of Finance – I Topic 10 Mathematics of Finance – II Topic 11 Mathematics of Finance – III	<a href="https://www.youtube.com/watch?v=EVUmRDYYbCc">https://www.youtube.com/watch?v=EVUmRDYYbCc</a>  <a href="https://opentuition.com/acca/f2/acca-f2-simple-interest-compound-interest/">https://opentuition.com/acca/f2/acca-f2-simple-interest-compound-interest/</a>  <a href="https://www.youtube.com/watch?v=wf91rEGw88Q">https://www.youtube.com/watch?v=wf91rEGw88Q</a>  <a href="https://opentuition.com/acca/f2/acca-f2-discounting-annuities-perpetuities/">https://opentuition.com/acca/f2/acca-f2-discounting-annuities-perpetuities/</a>
3.	Linear Equations, Functions and their Graphs	<i>Fundamentals of Business Mathematics</i> , Hamid A. Hakeem	Chapter 8	<a href="http://mathopenref.com/coordslope.html">http://mathopenref.com/coordslope.html</a>
		<i>Business Mathematics</i> , Nadeem Akhtar Siddiqui, Tariq Ali Khan	Chapter 3 & 4	

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Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
4.	Quadratic Equations, Quadratic Functions and their Graphs	<i>Fundamentals of Business Mathematics</i> , Hamid A. Hakeem	Chapter 8	<a href="http://mathopenref.com/tocs/quadratictoc.html">http://mathopenref.com/tocs/quadratictoc.html</a>
		<i>Business Mathematics</i> , Nadeem Akhtar Siddiqui, Tariq Ali Khan	Chapter 3 & 4	<a href="https://www.youtube.com/watch?v=UZTvYYoOrmI">https://www.youtube.com/watch?v=UZTvYYoOrmI</a>
5.	Simultaneous Solution of Equations and Linear Inequalities	<i>Algebra And Trigonometry For Class XI</i> , Punjab Text Book	Chapter 3: Topic 3.11 and Topic 3.12	<a href="https://www.teachwire.net/news/simultaneous-equations-worksheets-and-lesson-plans-for-ks3-and-ks4-maths">https://www.teachwire.net/news/simultaneous-equations-worksheets-and-lesson-plans-for-ks3-and-ks4-maths</a>
6.	Matrices and Determinants	<i>Fundamentals Of Business Mathematics</i> , Hamid A. Hakeem	Chapter 9	<a href="https://www.intmath.com/matrices-determinants/matrix-determinant-intro.php">https://www.intmath.com/matrices-determinants/matrix-determinant-intro.php</a>
		<i>Business Mathematics</i> , Nadeem Akhtar Siddiqui, Tariq Ali Khan	Chapter 5	
		<i>Algebra And Trigonometry For Class XI</i> , Punjab Text Book	Chapter 3	
		<i>Additional Mathematics</i> , Ho Soo Thong and Khor Nyak Hiong	Chapter 6	

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Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
7.	Derivative of Algebraic Functions	<i>Calculus and Analytical Geometry For Class XII</i> , Punjab Text Book	Chapter 2	
Not 8.	Sequence and Series	<i>Algebra and Trigonometry For Class XI</i> , Punjab Text Book	Chapter 6	<a href="https://teacher.desmos.com/acti vitybuilder/custom/5728afe1de f359f80593a284">https://teacher.desmos.com/acti vitybuilder/custom/5728afe1de f359f80593a284</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 2021 onwards.



آغا خان یونیورسٹی ایگزیمینیشن بورڈ  
AGA KHAN UNIVERSITY EXAMINATION BOARD

## Teaching and Learning Resources for Grade XII Business Statistics

### Recommended Key Textbook:

### Business Statistics for Grade XII:

- Hakim, Hamid A. (2006). *Fundamentals of Business Statistics*. Karachi: Meyari Matbooat.
- Siddiqui, Nadeem Akhter. (2001). *Business Statistics*, Lahore: Azeem Academy. (not mentioned in the reference book list).

### Additional Recommended Resource Material

Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
9.	Introduction to Statistics	<i>Statistics B.com part I</i> , Shahid Jamal.	Chapter 1	<a href="http://stattrek.com/statistics/dictionary.aspx?definition=qualitative%20variable">http://stattrek.com/statistics/dictionary.aspx?definition=qualitative%20variable</a>
		<i>Business Statistics I. Com II</i> , Tariq Ali Khan.	Chapter 1	
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 1	
		<i>Introduction to Statistics</i> , Ronald Walpole (3 <sup>rd</sup> edition)	Chapter 1	
		SCHAUM's Outline Series	Chapter 1	

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Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
10.	Presentation of Statistical Data	<i>Statistics B.com part I</i> , Shahid Jamal.	Chapter 1	<a href="https://www.emathzone.com/">https://www.emathzone.com/</a>
		<i>Business Statistics I. Com II</i> , Tariq Ali Khan.	Chapter 2	
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 2	
11.	Measures of Central Tendency and Quartiles	<i>Basic Statistics</i> , Douglas A. Lind and Robert D. Mason.	Chapter 3	<a href="https://cpb-us-east-1-juc1ugur1qwqqqo4.stackpathdns.com/cobblearning.net/dist/e/2677/files/2016/04/1-Measures-of-Central-Tendency-WS-1phgon5.pdf">https://cpb-us-east-1-juc1ugur1qwqqqo4.stackpathdns.com/cobblearning.net/dist/e/2677/files/2016/04/1-Measures-of-Central-Tendency-WS-1phgon5.pdf</a>
		<i>Statistics B.com part I</i> , Shahid Jamal.	Chapter 2	
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 3	
		<i>Tools of Statistical Analysis</i> , S.M. Ahsan Hussain.	Chapter 3	
12.	Measures of Dispersion	<i>Basic Statistics</i> , Douglas A. Lind and Robert D. Mason.	Chapter 3	
		<i>Statistics B.com part I</i> , Shahid Jamal.	Chapter 3	
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem.	Chapter 4	

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Topic No	Topic/ Sub-Topic/ SLO	Reference Book	Topic in the Reference Book	Reference Website
		<i>Tools of Statistical Analysis</i> , S.M. Ahsan Hussain.	Chapter 4	
13.	Number Index	<i>Basic Statistics</i> , Douglas A. Lind and Robert D. Mason.	Chapter 15	
		<i>Statistics B.com part 1</i> , Shahid Jamal.	Chapter 5	
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 7	
		<i>Tools of Statistical Analysis</i> , S.M. Ahsan Hussain	Chapter 7	
		<i>SCHAUM's Outline Series</i>	Chapter 6	
14.	Counting Techniques and Probability	<i>Basic Statistics</i> , Douglas A. Lind and Robert D. Mason.	Chapter 4	<a href="https://faculty.elgin.edu/dkernler/statistics/ch05/5-5.html">https://faculty.elgin.edu/dkernler/statistics/ch05/5-5.html</a>
		<i>Tools of Statistical Analysis</i> , S.M. Ahsan Hussain.	Chapter 9	<a href="http://faculty.kutztown.edu/fowler/Handouts/Math/MAT104/CountingTechniquesAndProbabilitySummary.pdf">http://faculty.kutztown.edu/fowler/Handouts/Math/MAT104/CountingTechniquesAndProbabilitySummary.pdf</a>
		<i>Statistics B.com part 1</i> , Shahid Jamal.	Chapter 8	<a href="https://www.onlinemathlearning.com/probability-tree-diagrams.html">https://www.onlinemathlearning.com/probability-tree-diagrams.html</a>

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15.	Scatter Diagram and Correlation	<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 8 & 9	<a href="https://www.mathsisfun.com/data/probability-tree-diagrams.html">https://www.mathsisfun.com/data/probability-tree-diagrams.html</a>
		<i>Introduction to Statistics</i> , Ronald Walpole (3 <sup>rd</sup> edition)	Chapter 4	
		<i>Statistics B.com part I</i> , Shahid Jamal.	Chapter 4	<a href="http://www.shelovesmath.com/algebra/intermediate-algebra/scatterplots-correlation-and-regression/">http://www.shelovesmath.com/algebra/intermediate-algebra/scatterplots-correlation-and-regression/</a>
		<i>Fundamentals of Business Statistics</i> , Hamid A. Hakeem	Chapter 6	
		<i>Basic Statistics</i> , Douglas A. Lind and Robert D. Mason.	Chapter 11	<a href="http://educ.jmu.edu/~drakepp/FIN360/readings/Regression_notes.pdf">http://educ.jmu.edu/~drakepp/FIN360/readings/Regression_notes.pdf</a>

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<sup>i</sup> This resource guide is a draft and the resources are subject to minor revision. Suggestions from AKU-EB affiliated schools regarding the resources are welcome.