

# IB DP Math Studies

## Unit 3 / Topic 6: Mathematical Models

1<sup>st</sup> and 2<sup>nd</sup> Quarters ♦ A-days ♦ 2016-2017

☺ This syllabus is a guide only and is subject to change. Any changes will be written on the board.  
It is your responsibility to check the board each day and copy the correct assignment into your planner. ☺

DATE	TOPIC	TOPIC NUMBER	TEXT REFERENCE	ASSIGNMENT	PA#
October 26 (W – A) Day 1	Relations and Functions	6.1	Chapter 16	Finish the Topic 4 Review and check it before next class using the posted key	PA18
October 28 (F – A)	<b>SUMMATIVE ASSESSMENT – Topic 4: Statistical Applications</b>	4.1-4.4	Chapters 10, 11	Read pages 484-491 p 486 (16A: 2) p 488-489 (16B: 6, 8)	PA19
November 1 (Tu – A) Day 2	Linear Models Quadratic Models	6.2 6.3	Chapters 16 and 17	p 493 (16D: 3, 4, 6, 7, 8) p 504 (17A: 1, 3, 4(a-c), 5, 8)	PA20
November 3 (Th – A) Day 3	Quadratic Models	6.3	Chapter 17	<del>p 527 Review Set 17B</del> "Quadratics Review, continued" WS	PA21
November 7 (M – A) Last Day of 1 <sup>st</sup> Quarter Day 4	<b>QUIZ 1 (Day 1)</b> Exponential Models	6.4	Chapter 18	Topic 6, Day 4 Homework Practice WS	PA1
<b>November 8 (Tu) - Election Day: Staff Day – No School for Students</b>					
November 10 (Th – A) First A-Day of 2 <sup>nd</sup> Quarter Day 5	Exponential Models	6.4	Chapter 18	p 542 Review Set 18B	PA2
<b>November 11 (F): Veterans' Day Holiday – No School</b>					
November 15 (Tu – A) Report Cards Issued Day 6	<b>QUIZ 2 (Days 2 – 5)</b> Other Mathematical Models	6.5 6.6 6.7	Chapter 19	p 545 (19A: 1, 2, 4a, 4d) p 549 (19B: 1, 2d, 3)	PA3
November 17 (Th – A) Adjusted Schedule – Collab./CAV Connection Day 7	Other Mathematical Models	6.5 6.6 6.7	Chapter 19	p 557 Review Set 19B	PA4
November 21 (M – A) Day 8	Topic 6 Unit Review	6.1-6.7	Chapters 16-19	Complete the Topic 6 Unit Review AND check it BEFORE 12/1/16 using the key posted in Edmodo.	PA5
November 23 (W – A) Adjusted Dismissal - Thanksgiving	<b>If you have a laptop that you can bring to class, bring it today!</b> Internal Assessment Work				PA6
<b>November 24 (Th) – 25 (F): Thanksgiving Holidays – No School Return to School on Monday, November 28 (B-Day)</b>					
<i>Happy Thanksgiving !!</i>					
November 29 (Tu – A)	Unit 4, Topic 1, Day 1: Number and Algebra	3.1, 3.5	Chapter 7	Finish Topic 1, Day 1 "Classwork" WS	PA7
December 1 (Th – A) Day 9	<b>SUMMATIVE ASSESSMENT - Unit 3, Topic 6: Mathematical Models</b>	6.1-6.7	Chapters 16-19	Read Chapter 7, Sections A and D Text p. 216-217 (2, 6, 7) Text p. 221 (1, 2, 6)	PA8

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## Unit 3 / Topic 6: Mathematical Models

1<sup>st</sup> and 2<sup>nd</sup> Quarters ♦ B-days ♦ 2016-2017

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DATE	TOPIC	TOPIC NUMBER	TEXT REFERENCE	ASSIGNMENT	PA#
<b>November 2 (W – B)</b> Day 1	Relations and Functions	6.1	Chapter 16	p 486 (16A: 1-4) p 488 (16B: 3, 5a, 5c, 5f, 8) p 490 (16C: 1, 2(a-i))	<b>PA18</b>
<b>November 4 (F – B)</b> Day 2	Linear Models Quadratic Models	6.2 6.3	Chapters 16 and 17	p 493 (16D: 3, 4, 6, 7, 8) p 504 (17A: 1, 3, 4(a-c), 5, 8)	<b>PA10</b>
<b>November 8 (Tu) - Election Day: Staff Day – No School for Students</b>					
<b>November 9 (W – B)</b> First Day of 2 <sup>nd</sup> Quarter Day 3	<b>QUIZ 1 (Day 1)</b> Quadratic Models	6.3	Chapter 17	p 527 Review Set 17B "Quadratics Review, continued" WS	<b>PA11</b>
<b>November 11 (F): Veterans' Day Holiday – No School</b>					
<b>November 14 (M – B)</b> Day 4	Exponential Models	6.4	Chapter 18	Topic 6, Day 4 Homework Practice WS	<b>PA12</b>
<b>November 16 (W – B)</b> Day 5	Exponential Models	6.4	Chapter 18	p 542 Review Set 18B	<b>PA13</b>
<b>November 18 (F – B)</b> Day 6	<b>QUIZ 2 (Days 2 – 5)</b> Other Mathematical Models	6.5 6.6 6.7	Chapter 19	p 545 (19A: 1, 2, 4a, 4d) p 549 (19B: 1, 2d, 3)	<b>PA14</b>
<b>November 22 (Tu – B)</b> Day 7	Other Mathematical Models	6.5 6.6 6.7	Chapter 19	p 557 Review Set 19B	<b>PA15</b>
<b>November 24 (Th) – 25 (F): Thanksgiving Holidays – No School</b> <b>Return to School on Monday, November 28 (B-Day)</b>					
<b>Happy Thanksgiving !!</b>					
<b>November 28 (M – B)</b> Day 8	Topic 6 Unit Review	6.1-6.7	Chapters 16-19	Complete the Topic 6 Unit Review AND check it BEFORE NEXT CLASS using the key posted in Edmodo.	<b>PA16</b>
<b>November 30 (W – B)</b> Day 9	<b>SUMMATIVE ASSESSMENT -</b> <b>Unit 3, Topic 6:</b> <b>Mathematical Models</b>	6.1-6.7	Chapters 16-19	Read Chapter 7, Sections A and D Text p. 216-217 (2, 6, 7) Text p. 221 (1, 2, 6)	<b>PA17</b>

## Topic 6 Overview

Students will identify the concept of a function and be able to identify and evaluate linear, quadratic, exponential, and polynomial functions. Students will be able to make accurate graphs of these functions and use a GDC to sketch and analyze less familiar functions.

## The BIG Idea for Topic 6 is . . .

- Through functions, patterns are given meaning. Understanding the characteristics or properties of a pattern allows modeling of real world data, and vice versa.

## Topic 6 Essential Questions

Be sure to answer these as we progress through the unit. Some or all of them may be used as essay questions on graded assessments. 😊

- ◆ How are functions defined and represented?
- ◆ What is the relationship between the graph of a function and its algebraic rule?
- ◆ How are growth and decay modeled by functions?
- ◆ How can the GDC be useful in graphing unfamiliar functions and solving unfamiliar equations?

Topic 6 Learning Target Sets		Set Mastered ✓	Summative Assessment Score (points)	Summative Assessment %
Learning Target Set A	Linear Models			
Learning Target Set B	Quadratic Models			
Learning Target Set C	Exponential Models			
Learning Target Set D	Other Mathematical Models			