Unit 3 – Functions and Graphs

DAY	Lab or Activity	Student workbook	Lecture -- Class notes	AV presentation	Follow-up	Homework	Assessment
1		3.1a – 3.1b	3.1a. Identifying qualitative graphs 3.1b. Determining inputs and outputs of functions		Ch. 2 Test	Assign 5 homework problems on functions from your textbook	
2		3.1c – 3.1f	3.1c. Finding domains of functions 3.1d. Applications 3.1e. Piecewise-defined function 3.1f. Greatest integer function			Assign 5 homework problems on functions from your textbook	
3		3.2a – 3.2c	3.2al. Functions defined by graphs 3.2b. Analyzing graphs 3.2c. Concavity and inflection points		Review 3.1a – 3.1f homework	Assign 5 homework problems on graphs of functions from your textbook	
4		3.2d – 3.2g	3.2d. Graph of a piecewise-defined function 3.2e. Absolute-value graph 3.2f. Greatest integer function 3.2g. Parametric graphs			Assign 5 homework problems on graphs of functions from your textbook	

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DAY	Lab or Activity	Student worksheet	Lecture -- Class notes	AV presentation	Follow-up	Homework	Assessment
5		3.3a – 3.3b	3.3a. Parabolas 3.3b. Three forms of quadratic functions		Review 3.2a – 3.2g homework	Assign 5 homework problems on quadratic functions from your textbook	
6		3.3c – 3.3d	3.3c. Changing from one form to another 3.3d. Quadratic applications			Assign 5 homework problems on quadratic functions from your textbook	
7					Review 3.3a – 3.3d homework		Quiz 3.1 – 3.3
8		3.4a – 3.4d	3.4a. Parent functions 3.4b. Vertical shifts 3.4c. Horizontal shifts 3.4d. Reflections		Quiz 3.1 – 3.3	Assign 5 homework problems on graphs and transformations from your textbook	
9		3.4e – 3.4g	3.4e. Stretches and compressions 3.4f. Combining transformations 3.4g. Applications			Assign 5 homework problems on graphs and transformations from your textbook	

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10		3.5a – 3.5c	3.5a. Sums and differences of functions 3.5b. Products and quotients of functions 3.5c. Composition of functions		Review 3.4a – 3.4g homework	Assign 5 homework problems on operations on functions from your textbook	
11		3.5d – 3.5e	3.5d. Domains of composite functions 3.5e. Applications			Assign 5 homework problems on operations on functions from your textbook	
12		3.6a – 3.6c	3.6a. Composition of a function and it's inverse 3.6b. Finding inverses by algebra 3.6c. Graphs of inverse		Review 3.5a – 3.5e homework	Assign 5 homework problems on inverse functions from your textbook	
13		3.6d – 3.6f	3.6d. Graphing inverses in parametric mode 3.6e. Determining whether an inverse is a function 3.6f. Restricting the domain			Assign 5 homework problems on inverse functions from your textbook	

PRE-CALCULUS PACING GUIDE

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DAY	Lab or Activity	Student worksheet	Lecture -- Class notes	AV presentation	Follow-up	Homework	Assessment
14		3.7a – 3.7b	3.7a. Average rate of change 3.7b. Average rate of change (algebraic)		Review 3.6a – 3.6 f homework	Assign 5 homework problems on rates of change from your textbook	
15		3.7c – 3.7d	3.7c. Average rate of change (geometric) 3.7d. Difference quotient			Assign 5 homework problems on rates of change from your textbook	
16					Review 3.7a – 3.7d homework		Quiz 3.4 – 3.7
17	Two Great Paradoxes	3.8			Quiz 3.4 – 3.7		Group presentations
18	Ch. 3 Project (optional)						
19					Ch. 3 Review		
20							Ch. 3 Test