

## Principles of Mathematics 12 Course Timeline

Day	Topic	Section	Worksheets	Homework (Tentative)
1	Introduction and Administrivia			Texts handed out and calculators checked (TI-83 graphing and table features)
2-3	Functions Review	1.1	Handout (Functions)	Handout reviews basic functions and their graphs
4	Translations – Vertical and Horizontal	1.2		P20 1,3,5-7,11,13(a,c), 16,17
5Q	Reflections over x- and y-axes	1.3		P31 1,2,4-6,8,9,11,15
6	Reflections – Inverses $f^{-1}(x)$	1.3		P32 7,13,14,16-18
7	Stretches – Vertical and Horizontal	1.4		P41 1,3,5,6,8,10,14,16,18
8Q	Combined Transformations	1.5	Problem (Math Mouse)	P51 1,3,4,6-10
9	Absolute Value Functions	1.6		P57 1,4,12
10	Reciprocal Functions	1.6		P57 2,3,6,10,11
11Q,12	Review/Flex			Study Guide P20-24
13	Test – Chapter 1 (Sept. 24)			
14	Exponential Growth and Decay	2.1		P69 1,2,7,9-11
15	Definition of Logarithm	2.2		P77 1,4,6,7,9
16	Laws of Logs	2.3		P83 1,4,6,7,9-11,13,17-19
17Q	Applications: Part 1	2.4		P92 1-5,8,10,13
18	Applications: Part 2	2.5		P98 3,6,14,19
19Q	Graphs of Exponential Functions	2.6		P109 1,2,5,7,9,14,15

<b>20</b>	Review (Arithmetic) Sequences and Series		Handout (Arithmetic S&S)	Handout to review work introduced in PMath 10
<b>21</b>	Geometric Sequences	2.7		P115 1-3,5,7,8,10,13
<b>22</b>	Geometric Series	2.8	Problem (S&S)	P124 3,4,6,7-10 P132 All
<b>23Q,24</b>	Applications and Problems		Handout (Geometric S&S Applications)	Handout considers a variety of Geometric sequence and series applications
<b>25</b>	Infinite Geometric Series	2.9		P130 2-6
<b>26Q</b>	Logarithmic Functions	2.10		P138 1,2,4,5,7,8,11-15
<b>27</b>	Solving Exponential Equations	2.11		P149 1-3,5-9(a,c)
<b>28-29</b>	Solving Logarithmic Equations & Applications	2.12	Problem (Continuous Growth)	P152 1-6(a,c),7-10
<b>30</b>	Continuous Exponential Growth		Handout (Continuous Growth and Decay)	Handout expands on previous days problem and gives other examples
<b>31Q,32</b>	Review/Flex			Study Guide P35-37
<b>33</b>	Test – Chapter 2 (Oct. 19)			
<b>34</b>	Periodic Motion – Degrees, Radians and Arclength	3.1 & 3.2		P167 1,2,4-8,10-11(a,c,e)
<b>35</b>	Angles in Standard Position – Coterminal Angles	3.3		P173 1,2,4,5,7,9-11,13
<b>36Q</b>	Sine and Cosine of Angles in Standard Position	3.4		P179 1-3,5,6,9,16,18
<b>37</b>	Sine and Cosine of Special Angles	3.5	Problem (30-60-90 Trig)	P188 1-4
<b>38Q</b>	Tangent	3.7		P209 1-5,7,8
<b>39-40</b>	Graphs of Sine, Cosine and Tangent	3.6 & 3.8		P196 1a,3a,10,11 P213 1a,6
<b>41</b>	Reciprocal Trig Functions and their graphs	3.9		P218 2-4,9
<b>42</b>	Review/Flex			Study Guide 47-50
<b>43</b>	Test – Chapter 3 (Oct. 29)			

<b>44</b>	The Functions $y=\sin x$ and $y=\cos x$	4.1		P232 1-4,6-8,10
<b>45</b>	Graphing Sine and Cosine – Amplitude, Vertical Displacement and Phase Shift	4.2		P245 1,3-5,18,19,25
<b>46Q</b>	Graphing Sine and Cosine – Period	4.3		P254 1-4,7,9,11,16,19
<b>47-49</b>	Review for Mid-Term Exam			

**Mid-Term Exam (all material completed to date) ... November 12**

<b>50Q</b>	Graphing $y=\sin (2\pi/p)x$ and $y=\cos (2\pi/p)x$	4.4	Calculator Lab (Sinusoidal Curves)	P265 1-3,5,14,15
<b>51-52Q</b>	Applications	4.5		P276 3,6-8,10
<b>53</b>	The Function $y=\tan x$	4.6		P287 1,3,5,7,9a-11a,12,17
<b>54</b>	Reciprocal Trig Functions and their graphs	4.7		P291 7-8(a,d,g),10
<b>55Q,56</b>	Review/Flex			Study Guide 49-50,60-62
<b>57</b>	Test – Chapter 3 <u>and</u> 4 (Nov. 23)			
<b>58</b>	Solving Trig Equations – Focus on Graphing Calculator Solutions	5.1		P302 3,5-8(a,c,e,g), 10a,11,16
<b>59</b>	Solving Trig Equations – Focus on Algebraic Solutions	5.2	Trig. Equations	P313 1,5,6c,7-9(a,c,e), 11-12(a,c)
<b>60Q</b>	Trig Identities - Pythagorean	5.3 & 5.4		P320 7,9,13 P326 1-4,7,8,13
<b>61</b>	Trig Identities - Sum and Difference	5.5		P333 1,3,10-12,15,22a
<b>62</b>	Trig Identities – Double Angle	5.6		P342 1,2,6,10,13,16a
<b>63Q,64</b>	Trig Identities in general		Trig. Identities	
<b>65-66</b>	Review/Flex			Study Guide 69-70
<b>67</b>	Test – Chapter 5 (Dec. 7)			
<b>68</b>	The Fundamental Counting Principle	6.1		P356 1-8,10,11,13

<b>69</b>	Permutations (Different Objects)	6.2		P364 1-5,8-14,18,19,21
<b>70Q</b>	Permutations (when some objects are alike)	6.3		P368 1-14
<b>71</b>	Combinations	6.4	Problem (Poker Hands)	P374 1-5,9-15,17,18,21
<b>72Q</b>	Pascal's Triangle and Pathway Problems	6.5		P384 1-3,5,9-15
<b>73-74</b>	The Binomial Theorem	6.6		P396 1,2(a,c,e,g),3,4(a,c,e,g), 5-9
<b>75Q</b>	Review/Flex			Study Guide 77-78
<b>76</b>	Test – Chapter 6 (Dec. 17)			

**Christmas Break**

<b>77</b>	Experimental and Theoretical Probability	7.1		P405 1-10,13
<b>78</b>	Related Events	7.2		P414 1-14, 16
<b>79Q</b>	Event A <b>or</b> B	7.3		P423 1-8,10
<b>80Q</b>	Event A <b>and</b> B	7.4		P429 1-17,22,26,27,29,30
<b>81Q,82</b>	Conditional Probability Bayes' Law	7.5	Problem (Cupcakes)	P439 1-3,5-9,12
<b>83</b>	Probability Using Combinatorics	7.6		P444 1,3-13,16,18-20,22,23
<b>84-85</b>	Probability using the Binomial Theorem	7.7	The Birthday Problem	P457 1-4,7-11,15-16
<b>86</b>	Distributions	8.1		P471 1-6,8
<b>87</b>	Binomial Probability Distribution		Binomial Distribution Calculator	Internet Applet allows the student to experiment with the BP distribution
<b>88Q,89</b>	Review/Flex			Study Guide 86-88
<b>90</b>	Test – Chapter 7&8 (Jan. 19)			

**91-** Review for FINAL EXAM ... practice examinations

**Math 12 Provincial Exam January 26, 2010 @ 1:00 pm**