

SCHEDULE

October-26-13 9:09 PM

	Topics Journal & Assign are based on this	HW Handouts , instead of textbook optional unless highlighted in which case choose some questions at your own discretion. However, do not just do easy ones and not just one question per topic, I suggest do at least 2 pages of written practice per night/topic or at least 10 questions per topic	Videos - optional unless highlighted	To Read - optional unless highlighted	Applets - to help visualize
	Binomial Expansion with Pascal's Triangle Day1 - pg2-4, journal #1-2, do 1st highlighted	http://mrsk.ca/11U/PRACTICEbinomialExpansion.pdf http://mrsk.ca/AP/binomialTHPascalTri.pdf	https://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2	https://investor.about.com/od/fundamentals/a/BiographicOfBlaisePascal.htm About Pascal	
	Using Differences to Find Equation Day2 - pg5-7, journal #3, do 1st highlighted	http://mrsk.ca/AP/PRACTICEseqSeriesFindEqtn.pdf			
0.5day	Notation and Vocabulary Day3 - pg8-10, journal #4ab, do 1st highlighted	Introduction to Patterns http://mrsk.ca/11U/PRACTICEIntroSeqRecursive.pdf http://mrsk.ca/11U/PRACTICECompareArithGeo.pdf Sigma Notation http://mrsk.ca/AP/SigmaNotation+PRACTICE.pdf http://mrsk.ca/AP/seqSigmaNotation.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2		http://www.widomaths.com/insseq1.asp
1.5days	Sequences Day4 - pg11-13, journal #4cd, do 1st + 2nd highlighted	Sequences http://mrsk.ca/11U/PRACTICEArithRecursive.pdf http://mrsk.ca/11U/PRACTICEGeoRecursive.pdf http://mrsk.ca/11U/PRACTICEExplicitRecursiveFindEqtn.pdf http://mrsk.ca/AP/ArithSeq.pdf http://mrsk.ca/AP/GeoSeq.pdf skip infinite series at the end word problems http://mrsk.ca/11U/PRACTICEseqWordProb.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2		http://calculusapplets.com/sequence.html Numerical Computation: http://www.univie.ac.at/future_media/moe/galerie/grenz.html#folgenmu_merisch Tower of Hanoi Puzzle http://www.towerofhanoi.org/solution-possibilities.php Or http://www.mathsisfun.com/games/towerofhanoi.html
2days	Series Day5 - pg14-16, journal #5, do 1st highlighted Day6 - pg17-19, do last highlighted	Series http://mrsk.ca/11U/PRACTICEArithSeries.pdf http://mrsk.ca/11U/PRACTICEFiniteGeomSeries.pdf word problems http://mrsk.ca/11U/PRACTICESeriesWordProb.pdf Mix of Sequences & Series http://mrsk.ca/AP/PRACTICESeqSerMix.pdf http://mrsk.ca/AP/PRACTICESeqSerMix2.pdf http://mrsk.ca/AP/PRACTICESeqSeriesMix3ANS.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2	http://www.math.wichita.edu/brown/moe/gauss.html About Gauss	http://calculusapplets.com/series.html
1.5days	Simple & Compound Interest (MCR) Continuous Compounding (AP) Day7 - pg20-22, journal #6, do 1st highlighted Day8 - pg23-25, do last highlighted	http://mrsk.ca/AP/SimpleCompoundInterest.pdf http://mrsk.ca/AP/PRACTICESimpleCompound.pdf http://mrsk.ca/AP/PRACTICEFinanceContComp.pdf http://mrsk.ca/AP/PRACTICEContinuousCompounding.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2	http://www.thefamouspeople.com/profile/leonhard-euler-biography-441.php About Euler	
1.5days	Annuities Day9 - pg26-28, journal #7, do some from both highlighted	http://mrsk.ca/AP/FutureValueAnnuity.pdf http://mrsk.ca/AP/PresentValueAnnuity.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2		
	Mix of Questions Day10 - pg29-31, do 1st highlighted	http://mrsk.ca/AP/PRACTICESimpleCompoundYieldFVPV.pdf			
	Activity Fibonacci & Golden Number	Fibonacci Sequence & Golden Number http://mrsk.ca/AP/ActivityFibonacciGoldenNumber.pdf Watch the videos in the playlist http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2	http://plus.maths.org/content/life-and-numbers-fibonacci About Fibonacci	
	Activity Finance TVM solver and Excel Spreadsheet	http://mrsk.ca/AP/ActivityFinanceTVM.pdf http://mrsk.ca/AP/ActivityFinanceExcel.pdf			
	Life Project Activity	http://mrsk.ca/AP/ACTIVITYLifeProjectOptions.pdf http://mrsk.ca/AP/ACTIVITYLifeProj.pdf			
	Optional Activity (can do later when we do Integration)	http://mrsk.ca/AP/ActivityInductionProofsSigmaProperties.pdf http://mrsk.ca/AP/mathInduction+PRACTICE.pdf http://mrsk.ca/AP/mathInduction.pdf	http://www.youtube.com/watch?v=PLGTICNN99HkVBAH7z4z2P3yVaeK2		

Websites used

<http://web2.slc.qc.ca/mh/009/Default.htm>
<http://www.horton.ednet.ns.ca/staff/wheadon/>
www.fredmath.net - now needs password
<http://teacherweb.com/NY/Roslyn/Loughran/apt5.aspx>

- The reciprocals of the positive integers produce a divergent series (harmonic series):

$$\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \dots \rightarrow \infty$$
- Alternating the signs of the reciprocals of positive integers produces a convergent series:

$$\frac{1}{1} - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \dots = \ln(2)$$
- Alternating the signs of the reciprocals of positive odd integers produces a convergent series (the Leibniz formula for pi):

$$\frac{1}{1} - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \frac{1}{11} + \dots = \frac{\pi}{4}$$
- The reciprocals of prime numbers produce a divergent series (so the set of primes is "large"):

$$\frac{1}{2} + \frac{1}{3} + \frac{1}{5} + \frac{1}{7} + \frac{1}{11} + \frac{1}{13} + \dots \rightarrow \infty$$
- The reciprocals of triangular numbers produce a convergent series:

$$\frac{1}{1} + \frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \frac{1}{15} + \frac{1}{21} + \dots = 2$$
- The reciprocals of factorials produce a convergent series (see e):

$$\frac{1}{1} + \frac{1}{1} + \frac{1}{2} + \frac{1}{6} + \frac{1}{24} + \frac{1}{120} + \dots = e$$
- The reciprocals of square numbers produce a convergent series (the Basel problem):

$$\frac{1}{1} + \frac{1}{4} + \frac{1}{9} + \frac{1}{16} + \frac{1}{25} + \frac{1}{36} + \dots = \frac{\pi^2}{6}$$
- The reciprocals of powers of 2 produce a convergent series (so the set of powers of 2 is "small"):

$$\frac{1}{1} + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \dots = 2$$
- Alternating the signs of reciprocals of powers of 2 also produces a convergent series:

$$\frac{1}{1} - \frac{1}{2} + \frac{1}{4} - \frac{1}{8} + \frac{1}{16} - \frac{1}{32} + \dots = \frac{2}{3}$$
- The reciprocals of Fibonacci numbers produce a convergent series (see phi):

$$\frac{1}{1} + \frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \frac{1}{5} + \frac{1}{8} + \dots = \psi$$