Math 1020/FA 1020

Math In Art

Additional Information

Material covered (refer to the textbook):

Section	Pages	Suggested Problems
1.1. Euclidean Geometry	1-6	
1.2. Euclidean Constructions	6-14	1--8
1.3. Golden Ratio	14-24	1--11
1.4. Fibonacci numbers	24-31	1--6
2.1. Plane Symmetries	33-42	1--9
2.3. Groups of Symmetries	55-60	1--7
2.4. Frieze Patterns (part)	61-72	1--3
2.5. Wallpaper designs; Tilings (part)	72-81	
2.6. Tilings and Art (part)	81-89	
3.1. Similarities	91-100	1--7
3.3. Fractals (part)	100-123	1--4
3.4. Julia Sets (part)	123-131	1--3
4.1. Non-Euclidean Geometries	143-146	
4.2. Inversion	146	
4.3. Hyperbolic Geometry	153-158	
4.4. Hyperbolic Constructions	158-163	1--7
4.5. Tilings in Hyperbolic Plane (part)	163-167	
5.1. Perspective	169-181	1--9
5.3. Polyhedra (part)	197-206	1--4
5.4. Conic Sections (part)	206-216	1--6
6.1. Homotopy	223-230	1--6
6.2. Two-Manifolds and Euler (part)	230-237	1--6
6.3. Other Manifolds (overview only)	237-247	

Information about contacting your Instructor:

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Web page (maintained by A02 instructor):
http://server.math.umanitoba.ca/homepages/kalajdzi

Web page (maintained by A01 instructor):
http://home.cc.umanitoba.ca/~davidsom/

Another web page which you might find useful
(This was checked at the time this was written):
http://server.maths.umanitoba.ca/homepages/sasho/

Note on Academic Honesty:

The Department of Mathematics, the Faculty of Science and the University of Manitoba regard acts of academic dishonesty in quizzes, tests, examinations or assignments as serious offenses and may assess a variety of penalties depending on the nature of the offense.

Acts of academic dishonesty include bringing unauthorized materials into a test or exam, copying from another student, plagiarism and examination personation. Students are advised to read section 7 (Academic Integrity) and section 4.2.8 (Examinations: Personations) in the "General Academic Regulations and Requirements" of the current Undergraduate Calendar. **Note, in particular that cell phones and pagers are explicitly listed as unauthorized materials, and hence may not be present during tests or examinations.**

Penalties for violation include being assigned a grade of zero on a test or assignment, being assigned a grade of "F" in a course, compulsory withdrawal from a course or program, suspension from a course/program/faculty or even expulsion from the University. For specific details about the nature of penalties that may be assessed upon conviction of an act of academic dishonesty, students are referred to University Policy 1202 (*Student Discipline Bylaw*) and to the Department of Mathematics policy concerning minimum penalties for acts of academic dishonesty.

The Student Discipline Bylaw is printed in its entirety in the Student Guide, and is also available on-line or through the Office of the University Secretary. Minimum penalties assessed by the Department of Mathematics for acts of academic dishonesty are available on the Department of Mathematics web-page.

All Faculty members (and their teaching assistants) have been instructed to be vigilant and report incidents of academic dishonesty to the Head of the Department.