

Preparation for the Geometry (Math 32) Challenge Test

The geometry challenge test involves 30 multiple choice questions done in 40 minutes. You will not be allowed to use a calculator but there are no large numbers to worry about. The following page is taken from the table of contents of the geometry text we use at SMC, ELEMENTARY GEOMETRY FOR COLLEGE STUDENTS, 3rd ed., by Daniel Alexander. It lists selected topic areas on which you might expect to see questions. The questions don't include proofs but will ask things like, "How large is the angle?", "How long is the segment?", "Which triangles are congruent?", "Which of the following reasons guarantees that a particular given statement is true?" You will also find below a list of geometry textbooks and references available in the SMC Library. Note that the 1992 and 1999 editions of the Alexander book are listed. The 2003 edition is not available except to students currently enrolled in the course.

When you are ready to take the test, contact Math Department Chair, Fran Manion, by phone (310-434-4722) or email (manion_fran@smc.edu) to make an appointment. If you send an email, be sure to put **Math 32 Challenge Test** in the subject line.

Additional study materials can be found at the following links:

http://www.smc.edu/math/stu_resources_math_32.htm and
<http://www.smc.edu/apps/pub.asp?Q=1373>

Geometry Review Texts in SMC Library

<u>Call Number</u>	<u>Title</u>	<u>Author</u>
QA452.A44 1999	<u>Elementary Geometry for College Students</u> **	Alexander, Daniel C
QA452.A44 1992	<u>Elementary Geometry for College Students</u> **	Alexander, Daniel C
QA453.G39 1995	<u>Geometry for College Students, 3rd ed</u>	Geltner, Peter B.
QA445.S38 1981	<u>Scott. Foresman Geometry</u>	Hirsch. Christian R
QA453.K34	<u>Geometry</u>	Kelly, Paul Joseph
QA445.R53 1999	<u>Schaum's outline of theory and problems of geometry : includes plane, analytic, and transfonnational geometries</u> (available commercially at Barnes & Noble, etc)	Rich, Barnett
QA461.S68 2000	<u>How to Solve Word Problems in Geometry</u> Sova,	Dawn

** An older edition of the geometry text used at SMC. The current edition is on reserve for the use of students enrolled in Math 32.

Available commercially but not in the Library –
Geometry Success in 20 Minutes a Day, 2nd ed by Debbie Thompson, Sept 2005

Selected Geometry Review Topics
for the
Geometry Challenge Test
ELEMENTARY GEOMETRY FOR COLLEGE STUDENTS

Chapter 1 – Line and Angle Relationships

- 1.3 Early Definitions and Postulates
- 1.4 Angles and Their Relationships

Chapter 2 – Parallel Lines

- 2.1 The Parallel Postulate and Special Angles.
- 2.3 Proving Lines Parallel
- 2.4 The Angles of a Triangle
- 2.5 Convex Polygons

Chapter 3 - Triangles

- 3.1 Congruent Triangles
- 3.2 Corresponding Parts of Congruent triangles
- 3.3 Isosceles Triangles

Chapter 4 - Quadrilaterals

- 4.1 Properties of a Parallelogram
- 4.2 The Parallelogram and Kite
- 4.3 The Rectangle, Square, and Rhombus
- 4.4 The Trapezoid

Chapter 5 – Similar Triangles

- 5.1 Ratios, Rates, and Proportions
- 5.2 Similar Triangles and Polygons
- 5.3 The Pythagorean Theorem
- 5.4 Right Triangles

Chapter 6 - Circles

- 6.1 Circles and Related Segments and Angles
- 6.2 More Angle Measures in the Circle
- 6.3 Line and Segment Relationships in the Circle

Chapter 7 – Areas of polygons and Circles

- 7.1 Area and Initial Postulates
- 7.2 Perimeter and Area of Polygons
- 7.3 Regular Polygons and Area
- 7.4 Circumference and Area of a Circle