

Tell me what's on the exam...

First, proofs: not a magic word - just explain why true!

Chapter 1 eqns of lines/rays/segments
parametric, normal (special)
 \perp , \parallel
 $P + t(Q - P)$ or $aP + bQ$, $a + b = 1$
betweenness.

Chapter 2 Working w/ distances, esp. as $\|x\|^2 = x \cdot x$
(Δ ineq, Pyth. Thm)

Chapter 3 Defⁿ of angle measure
 $\theta = \arccos(u \cdot v) = \int_u^v \frac{1}{\sqrt{1 - e^2}} dt$, u, v unit DI's for angle
⊗

$\arccos(0)$, $\arccos(1/2)$, $\arccos(1/\sqrt{2})$, π

Use of \otimes to prove basic facts about angles -
alt. angles, vert. angles, angle of Δ .

Chapter 4

Def of isometry, congruence

Composition of isometries is isom.

BC's

$U(X) = MX + P$, $\exists!$ isom b/w cong Δ 's

$U(aP + bQ) = aU(P) + bU(Q)$ if $a+b=1$

Chapter 5

almost nothing (?) directly.

I'll give you
 R_θ , F_θ , $\cos 2\theta$
 $\sin 2\theta$

Chapter 6

Formulas for ℓ , \mathcal{T} , \mathcal{R} , \mathcal{M}

Basic results about compositions, how to prove/explain w/

Def/basics of $\mathcal{G}(X)$