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)
\[ L, \parallel \]
\[ P + t(Q - P) \text{ or } aP + bQ, atb = 1 \]
betweenness.

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

Chapter 3  Def. of angle measure
\[ \theta = \arccos(u \cdot v) = \int_0^1 \frac{1}{u \cdot \sqrt{1 - v^2}} \, dt, \text{ } u,v \text{ unit DI's for angle} \]
arccos(0), arccos(\(\frac{1}{2}\)), arccos(\(\frac{1}{\sqrt{2}}\)), \pi

Use of \(\ast\) to prove basic facts about angles -
alternate angles, vertical angles, angle of \(\Delta\).

Chapter 4

Definition of isometry, congruence
Composition of isometries is isom.
BC's
\(U(X) = MX + P, \exists! \text{ isom } b/w \text{ cong } \Delta's\)
\(U(aP + bQ) = aU(P) + bU(Q)\) if \(a+b=1\)

Chapter 5

almost nothing (?) directly.

Chapter 6

Formulas for \(\ell, T, R, M\)
Basic results about compositions, how to prove/explain \(\ell\)/
Definition/basics of \(G(X)\)

I'll give you \(R_\theta, F_\theta, \cos 2\theta, \sin 2\theta\)