chapter four syllabus

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| **Date** | **Concept** | **Homework** | **Due Date** |
| 9/15 M | Triangle Theorems: 4.2 | p. 227: 4-15, 20, 28-33 | 9/16 Tu or 9/17 W |
| 9/16 Tu or 9/17 W | Congruent Triangles: 4.3 | p. 235: 3-10, 17, 18, 23-25, 31-34 | 9/18 Th or 9/19 F |
| 9/18 Th or 9/19 F | Triangle Inequalities: 5.5 | p. 336: 18-31 (all), 42-48 (evens) | 9/22 M |
| 9/22 M | Quiz on 4.2, 4.3, 5.5; Transformations Review | Worksheet on congruence | 9/23 Tu or 9/24 W |
| 9/23 Tu or 9/24 W | Proving Triangles Congruent: SSS/SAS | SSS-SAS Worksheet | 9/25 Th or 9/26 F |
| 9/25 Th or 9/26 F | Proving Triangles Congruent: ASA/AAS/HL; why SSA fails | ASA-AAS Worksheet | 9/29 M |
| 9/29 M | Review | p. 285: 8-21 | 9/30 Tu or 10/1 W |
| 9/30 Tu or 10/1 W | Assessment; Launching Triangle Properties | TBD |  |

skills/learning goals

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| 1. | Prove and use theorems about triangles, including angle sum, exterior angle, third angles. |
| 2. | Define congruence in terms of identical and matching parts. |
| 3. | Determine whether three given lengths will make a triangle. |
| 4. | Specify a range of values for the third side of a triangle given two lengths. |
| 5. | Use the concept of triangle rigidity to show why SSS and SAS congruence works. |
| 6. | Develop basic geometric proofs using statements and reasons. |
| 7. | Understand the reflexive and transitive properties and their roles in logical reasoning. |
| 8. | Prove triangles congruent using the shortcuts SSS/SAS/ASA/AAS/HL |
| 9. | Prove parts of triangles congruent using CPCTC. |

City Project: Draw a city map using only a compass and straight edge that meets the conditions below.

Overview: City planners and designers must be able to accurately draw parallel and perpendicular lines to create a city map.

Materials: poster or blank paper, colored pencils or markers, eraser, compass and straight edge

Directions: Assume no two buildings can occupy the same space. Make your construction lines (arcs) light so that they may be easily erased. Label all parallel lines with double arrows. Label the intersections of perpendicular lines with the right angle symbol.

Conditions:

1. Use a straight edge to draw (and name!) a street across your paper.
2. Draw and name a street that intersects the previous street
3. Construct and label **three** streets that are parallel to one of the streets you just drew.
4. Construct at least two transversal streets that are perpendicular to the parallel streets.
5. Place a house and a school on a pair of same-side interior angles.
6. Place a bank and a post office on corresponding angles.
7. Place a grocery store and an electronics store on alternate interior angles.
8. Place a movie theatre and animal shelter on alternate exterior angles.
9. Place a water-tower exactly halfway between the bank and post office.
10. Place a park exactly halfway between the grocery store and school.
11. Sketch traffic lights on at least four intersections.
12. Place a traffic circle on at least one intersection.
13. Place a hospital exactly this length from the electronics store:

Credit will be given for geometric accuracy (60%) , neatness (10%), and creativity (30%)

**DUE: 10/1**