

New Concepts

Problem Set #12

“Each problem that I solved became a rule which served afterwards to solve other problems.”

- Rene Descartes

New Postulates and Theorems

- If two parallel lines are cut by a transversal, then corresponding angles are congruent. (Postulate 10)
- Theorem 13 – If two parallel lines are cut by a transversal, then alternate interior angles are congruent. (AIA)
- Theorem 14 – If two parallel lines are cut by a transversal, then same-side interior angles are supplementary.
- Theorem 15 – If a transversal is perpendicular to one of two parallel lines, then it is perpendicular to the other one also.

Exercises:

p.81 #7-25

Problems:

(Your goal for these problems is not simply to solve, but rather to write an elegant solution to justify your result. It should be written well enough so that it can be shown to your peers and they can reason through your process without the need for you to add comment)

12-1 Increasing Numbers

Of the integers between 10^2 and 10^3 that have no repeated digit, how many have digits that increase from left to right? (i.e. 2,478)