

### New Concepts

- Perpendicular

### Problem Set #9

*“One of the big misapprehensions about mathematics that we perpetrate in our classrooms is that the teacher always seems to know the answer to any problem that is discussed. This gives students the idea that there is a book somewhere with all the right answers to all of the interesting questions, and that teachers know those answers. And if one could get hold of the book, one would have everything settled. That's so unlike the true nature of mathematics.”*

- Leon Henkin

### New Postulates and Theorems

- Theorem 7 – If two lines are perpendicular, then they form congruent adjacent angles.
- Theorem 8 – If two lines form congruent adjacent angles, then the lines are perpendicular.
- Theorem 9 – If the exterior sides of two adjacent acute angles are perpendicular, then the angles are complementary.

### Exercises:

p.58 #2-26

### Problems:

#### 9-1 Primes

"There are exactly 25 prime numbers less than Z."  
is true when  $Z = 100$ . For how many positive integers  $Z$  is the statement true?