Name:	
CC Geometry Homework	

## Slope and Parallel Lines

- 1) To prove that two non-intersecting line segments are parallel, show that the
  - A) slopes of the two line segments are equal
  - B) two line segments have the same length
  - C) two line segments have the same midpoint
  - D) slopes of the two line segments are negative reciprocals
- 2) What is the slope of the line that passes through points (-1,5) and (2,3)?

3) What is the slope of the line that passes through the points (1,3) and (3,7)?

4) The vertices of a triangle are P(-1,4), Q(6,-3), and R(2,9). Find the slope of each side of the triangle.

5) In quadrilateral ABCD, AB || CD. If the slope of  $\overrightarrow{AB}$  and  $\overrightarrow{CD}$  are  $\frac{3}{5}$  and  $\frac{9}{x}$ , respectively, then what is the value of x?

Show that the line joining $A(-4,-1)$ and $B(3,1)$ is parallel to the line joining $C(4,4)$ and $D(-3,2)$						
500 Show that the line joining At-4 - D and Bt5 D is parallello the line joining t (4.4) and Dt-5 /	<b>6</b> )	Charry that the line	ioimino A ( 1 1)	$\sim$ and D(2.1) is	manallal ta tha lina	C(4.4) and $D(2.2)$
	$\mathbf{O}$	Show that the line	101111119 A(-41)	LAUG DOLLIS	Daranerio ne ine	101111119 C.(4.4) ANG LJC-5.7.7

- 7) Given: A(1,-1), B(5,7), C(0,4), and D(3,k)
  - (a) Find the slope of  $\overrightarrow{AB}$ .
  - (b) Express the slope of  $\overrightarrow{CD}$  in terms of k.
  - (c) If  $\overrightarrow{AB} \parallel \overrightarrow{CD}$ , find the value of k.

- 1) A
- 2)  $-\frac{2}{3}$
- 3) 2
- 4) slope PQ = -1, slope QR = -3, slope PR =  $\frac{5}{3}$
- 5) 15
- 6) slopes of AB and CD =  $\frac{2}{7}$
- 7) (a) 2; (b)  $\frac{k-4}{3}$ ; (c) 10