Answers to the chapter 3 practice quiz

1. $x + 66 = 2x - 8$ $-x \quad +8 \qquad -x +8$ $74 = x$ Check : $74 + 66 = 140$ $2(74) - 8 = 140$	2. Alternate exterior angles pairs are: (9,16), (10,15)
3. The two remote interior angles sum is an exterior angle. m<2 = 75 + 38 = 113 <1 and <2 are a linear pair m<1 = 180 -113 = 67	4. Triangle Sum Theorem: $2x + 4 + 2x - 9 + x = 180$ $5x - 5 = 180$ $+5 \quad +5$ $\frac{5x}{5} = \frac{185}{5}$ $X = 37$ m<D = 37 m<C= 2(37) +4 = 78 m<E =2(37) -9 = 65
5. $2x + 5y = -1$ $-2x \qquad -2x$ $\frac{5y}{5} = \frac{-2x}{5} - \frac{1}{5}$ $Y = -\frac{2}{5}x - \frac{1}{5}$	#5. Continued: $\frac{10y}{10} = \frac{-4x}{10} - \frac{20}{10}$ $Y = -4/10\ x - 2$ $Y = -\frac{2}{5}x - 2$ Parallel lines

6. Use: $\frac{y_2-y_1}{x_2-x_1}$ $\frac{-6-2}{4-7} = \frac{-8}{-3} = \frac{8}{3}$	7. $\overline{AB} = \frac{3-11}{-8--4} = \frac{-8}{-4} = \frac{2}{1}$ $\overline{CD} = \frac{3-2}{-1-1} = \frac{1}{-2}$ These are opposite reciprocals so they are Perpendicular lines
8. Use Point-slope formula: $y-y_1 = m(x-x_1)$ Y - 4 = ½ (x - - 2) Y - 4 = ½ x + 1 Y = ½ x + 5	
9. 2x - 7y = -42 $\frac{-7y = -2x - 42}{-7 \quad -7 \quad -7}$ Y = 2/7 x + 6	#9 continued $\frac{4y = -7x - 2}{4 \quad 4 \quad 4}$ y = -7/4 x - 2/4 y = -7/4 x - ½
Neither parallel nor perpendicular	