

Name: \_\_\_\_\_

**Math 80 Worksheet #6**  
**March 9, 2007**

1. Solve the following equations:

(a)  $x^2 + x - 42 = 0$

(b)  $2a^2 - 7a + 3 = 0$

(c)  $5t^2 + 15t = 0$

(d)  $m(m - 1) = 5m - 5$

2. Two cars leave an intersection at the same time. One car is heading north and the other is heading west. At a particular instant, the distance that the northbound car has traveled is 2 miles further than the distance that the westbound car has traveled. At this time, the cars are 10 apart. How far has the northbound car traveled from the intersection?

3. Evaluate the rational expression  $\frac{4y-x}{x^2+2y}$  when  $x = 2$  and  $y = -1$ .

4. For what values of  $x$  are the following expressions undefined?

(a)  $\frac{3}{x}$

(b)  $\frac{5x}{3x-6}$

(c)  $\frac{1-x}{x^2-9x+18}$

(d)  $\frac{20-x^4}{3}$