

# Quiz1

September 7, 2007

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

Note: Each problem is worth 25 points, so the maximum grade you can get is 100 points. *Good Luck!!*

(1) Solve the equation for  $x$ ,  $\frac{4}{x-1} + \frac{2}{x+1} = \frac{35}{x^2-1}$ .

(2) A woman earns 15% more than her husband. Together they make \$69,875 per year. What is the husband's annual salary?

(3) Find all values of  $k$  that ensure the equation  $2x^2 - 8x + k = 0$  has exactly one real solution. What is the real solution?

(4) Evaluate  $(\frac{2}{3} + 7i)(6 - \frac{1}{2}i)$  and write the result in the form  $a + bi$ .