

Answer the questions in the spaces provided and label all of your work.  
Responses with no work may receive no credit even if the answer is correct. Box your final answer.

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

Section: \_\_\_\_\_

**4 points** 1) Let  $f(x) = -\frac{2}{x}$ . Simplify the difference quotient  $\frac{f(x+h)-f(x)}{h}$  as much as possible (*Assume  $h \neq 0$* ).

**4 points** 2) Solve the inequality and state the domain in interval notation:  $x^2 - 2x - 3 > 0$

**2 points** 3) Find the equation of the line passing through the point  $(3, -4)$  perpendicular to the line  $8x + 6y = 15$ .