

Show work for problems 1–3; use the back of the sheet if necessary.

1. **(6 points)** Bill distributed \$1000 between two investments: a CD which returns 1% annual interest, and a mutual fund which returns 3% annual interest. He earned a total of \$18 in interest after a year. How much money did he put into each investment?
  
  
  
  
  
  
  
  
  
  
2. **(3 points)** Solve the linear inequality  $2x + 2 < 7x - 1$ ; you may express the solution either in terms of  $x$  or in interval notation.
  
  
  
  
  
  
  
  
  
  
3. **(4 points)** Find an equation of the line through  $(-2, 5)$  and  $(1, -1)$ .
  
  
  
  
  
  
  
  
  
  
4. **(3 points)** Given the piecewise function  $f(x) = \begin{cases} 5 & \text{if } x \leq 2 \\ 2x - 3 & \text{if } x > 2 \end{cases}$ , calculate the values of the following expressions:
  - $f(1)$ .
  
  - $f(2)$ .
  
  - $f(3)$ .
  
  
  
  
  
  
  
  
  
  
5. **(4 points)** Find the domain of the function  $g(x) = \sqrt{7 - 3x}$ .