

Business PreCalculus MATH 1643 Section 004, Spring 2014
Homework 15

- 1- Let $f(x) = x - \lceil x \rceil$. Evaluate $\frac{f(2.3) - f(-2.3)}{2}$.
- 2- Given $f(x) = x^2 + x$, find and simplify $\frac{f(x) - f(3)}{x - 3}$.
- 3- Given $f(x) = \begin{cases} 3x - 1 & \text{if } x < -2 \\ 5 - 2x & \text{if } -2 \leq x < 1, \\ x^2 - 1 & \text{if } x \geq 1 \end{cases}$, then find $f(\frac{1}{2}) + f(-4)$.
- 4- Find the domain and the range of $f(x) = \frac{1}{x-1}$.
- 5- Find the domain and the range of $f(x) = \sqrt{x+1}$.