

Honors Math 181 Homework 2 Version A

1. Solve the following inequalities.

(i) $\frac{1}{x-5} \geq \frac{2}{x-7}$

(ii) $\left| \frac{1}{x-5} \right| \geq \frac{2}{x-7}$

2. Simplify the following sums.

(i) $\sum_{k=1}^n k(k+1)$

(ii) $\sum_{k=7}^{2n+1} k^3$

3. Use the δ - ϵ definition of continuity to show

(i) $f(x) = 3x$ is continuous at any point x_0

(ii) $g(x) = x^2$ is continuous at any point x_0