

Math 151
Supplement to In-class Worksheet

1. Verify that the function $f(x) = \sqrt{x-3}$ on the interval $[4, 28]$ satisfies the conditions for the Mean Value Theorem, and find the number c in $[4, 28]$ guaranteed by the Theorem.
2. Find the following limits.

(a) $\lim_{x \rightarrow 1^-} \frac{\sqrt{x+3}}{1-x^2}$

(b) $\lim_{x \rightarrow -\infty} \frac{3x^4 - x^2 + x + 17}{5x^4 + 4x^3 - x + 5}$

(c) $\lim_{x \rightarrow -\infty} \frac{3x^4 - x^2 + x + 17}{4x^3 - x + 5}$