

1. Use the ε, δ definition of the limit to prove $\lim_{x \rightarrow 5} (2x - 3) = 7$
2. Prove that $\lim_{x \rightarrow 3} (x^2 + 2x - 5) = 10$
3. In answering the following question, round all values to the nearest 0.01.
Given $f(x) = \frac{1}{x-2}$, $\lim_{x \rightarrow 3} f(x) = 1$, and $\varepsilon = 0.1$, find the largest value of δ such that
If $0 < |x - 3| < \delta$, then $|f(x) - 1| < \varepsilon$.
4. Use the ε, δ definition of the limit to prove $\lim_{x \rightarrow 5} (3x - 4) = 11$
5. Prove that $\lim_{x \rightarrow 2} (x^2 - 3x + 3) = 1$
6. Prove that $\lim_{x \rightarrow 2} (2x^2 - x - 2) = 4$

More:

1. $\lim_{x \rightarrow 2} (x^2 - 3x + 5) = 3$
2. $\lim_{x \rightarrow 1} (x^2 + 5x + 4) = 10$
3. $\lim_{x \rightarrow -1} (3x^2 - x + 4) = 8$