

Delta-Epsilon Limits

Directions: Prove each limit is either correct or incorrect using a delta-epsilon proof.

1. $\lim_{x \rightarrow 4} 2x - 5 = 3$

2. $\lim_{x \rightarrow -1} 3x + 7 = 4$

3. $\lim_{x \rightarrow -3} -2x - 8 = -2$

4. $\lim_{x \rightarrow 1} 3x + 1 = 2$

5. $\lim_{x \rightarrow 4} x^2 - 4 = 12$

6. $\lim_{x \rightarrow 3} x^2 - 2x + 1 = 4$

7. $\lim_{x \rightarrow 1} x^2 + 1 = 2$

8. $\lim_{x \rightarrow 3} x^3 - 10 = 17$

9. $\lim_{x \rightarrow 2} 2x^3 + 1 = 17$

10. $\lim_{x \rightarrow 3} \frac{1}{x} = \frac{1}{3}$

11. $\lim_{x \rightarrow c} \frac{2}{x} = \frac{2}{c}$