

## Algebraic Limits Study Group Activity

(Groups of 3 or 4 people)

**Purpose of activity:** Gain a deeper understanding of how to compute limits algebraically by solving a problem on your own and then teaching it to your peers.

**Due Date:** Tuesday September 4<sup>th</sup>.

**Individual Portion:** Everybody in the group should choose ONE of the problems below. Solve your problem on your own before you meet with your group.

$$\lim_{x \rightarrow 0} \frac{\sqrt{2-x} - \sqrt{2}}{x}$$

$$\lim_{x \rightarrow 1} \frac{1}{x-1} - \frac{2}{x^2-1}$$

$$\lim_{x \rightarrow 0} \frac{x^2 - 81}{\sqrt{x} - 3}$$

$$\lim_{x \rightarrow 2} \frac{\frac{1}{x} - \frac{1}{2}}{x - 2}$$

**Group Portion:** Take turns teaching your problem to the rest of the group. Use a whiteboard to clearly show each step to your groupmates. Record your teaching using a phone or camera.

**Assessment:** Upload your video to Blackboard.