Due 29 Aug, at start of recitation. Write up your solution carefully.

· 6

1. A rocket takes off vertically. Two observers, A and B, are standing a mile apart. At a certain moment, the angle of elevation for the rocket is 30° for observer A and 40° for observer B. What is the height of the rocket?

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2. If $\lim\limits_{x \to 1} \dfrac{f(x) - 3}{x - 1} = 5$, find $\lim\limits_{x \to 1} f(x)$.

Almost all of the credit in this question is for justifying the number you get.