Exam 1 EC (Max 10 points)   Due in class 6/13/2018   Name:

NOTE: YOU MUST SHOW YOUR WORK TO RECEIVE FULL CREDIT. REMEMBER TO BOX YOUR FINAL AN-
SWER(S). THIS EXTRA CREDIT IS WORTH min(10,100-(Exam 1 Score)). IF YOU GOT AN A ON EXAM 1, YOU
CAN ONLY GET A MAXIMUM SCORE OF 100%.

1. (5 pts) Differentiate $f(x) = \sqrt{3x}$ algebraically using limits.

2. (5 pts) Evaluate the limit, if it exists: $\lim\limits_{x \to 4} \dfrac{\frac{1}{4} - \frac{1}{x}}{4x^2 - x^3}$. Show your work algebraically.