Instructions. Put the first and last name of everyone in your workgroup at the top of your paper. Everyone is to do their own worksheet but only one from each group is graded with the score shared. Be sure to show your work and explain your reasoning.

1. Compute the limit, if it exists.
   
   (a) \( \lim_{x \to \infty} \frac{3x-2}{2x+1} \)
   
   (b) \( \lim_{x \to -\infty} \frac{3x-2}{2x+1} \)
   
   (c) \( \lim_{x \to \infty} \frac{1-x^2}{x^3-x+1} \)
   
   (d) \( \lim_{x \to \infty} \frac{1-e^x}{1+e^x} \)

2. The following are the graphs of position of two racers.

Which racer has a faster average speed? When was each racer running faster than the other (approximately)? Which racer was running the fastest at the end of the race?

3. Use the definition of the derivative to compute the derivative.

   (a) \( f(x) = 6 \)

   (b) \( f(x) = x^2 - 2x + 3 \)