

## Math 157 - Quiz 2

September 3, 2014

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (3 points) Use a table of values to estimate the following limit. Your table must show function values at six or more points.

$$\lim_{x \rightarrow 9} \frac{x^2 - 8x - 9}{\sqrt{x} - 3}$$

2. (3 points) Use algebra to find the limit analytically.

$$\lim_{x \rightarrow -5} \frac{x^2 + 7x + 10}{x + 5}$$

3. (4 points) Pregnant women metabolize some drugs at a slower rate than the rest of the population. The half-life of caffeine is about 4 hours for most people. In pregnant women, it is 10 hours. If a pregnant woman and her husband each have a cup of coffee containing 100 mg of caffeine at 8 am, how much caffeine does each have left in the body at 10 pm?