

Quiz

Name: _____

1. For the rate equation $y' = (y + 1)(5 - y)$ sketch, on the same set of axis, the graphs of the solutions so that (a) $y(0) = 0$ and (b) $y(0) = 6$.

(c) For the solution with $y(0) = 0$ what is a reasonable estimate for $y(137.2)$? (Put your answer in the form of a sentence.)

2. Let $f(t) = t + \frac{4}{t}$ be defined for $t > 0$.

(a) Compute

$$f'(t) =$$

$$f''(t) =$$

(b) Find the smallest value of $f(t)$ on the interval $0 < t < \infty$. Where does this smallest value occur? (You should put your answers in the form of sentences.)