MAT 035, Quiz #6, Fall 2016                     Name _____ KEY _____

**Instructions**: Show all work to receive full credit.  You should note any formulas used or calculator functions used, their inputs and outputs.  I cannot grade work if I don't know where an answer came from.  Be sure complete all parts of each questions, including requests for interpretation and explanations.  Be as thorough as possible.

1.  Find the equation of the line connecting $(-1,4)$ and $(3,8)$.
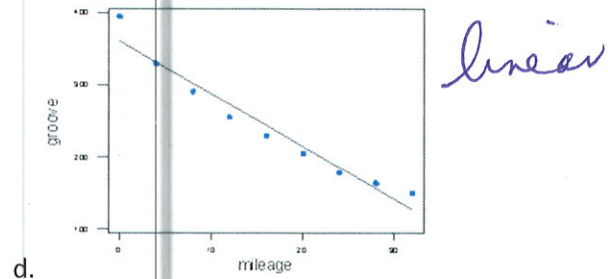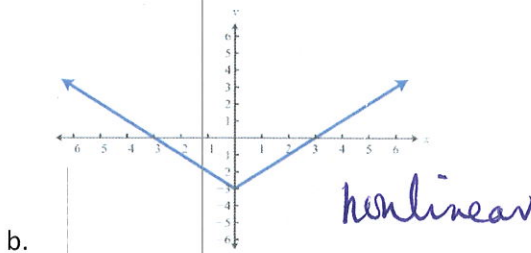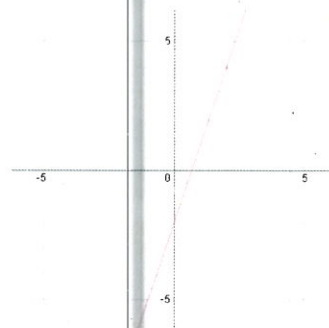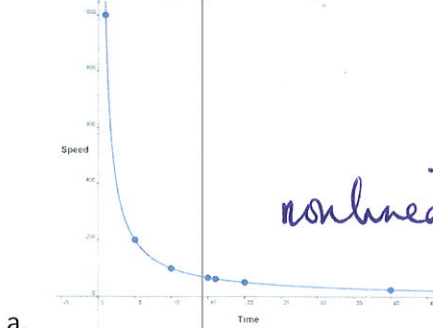
$$\frac{8-4}{3-(-1)} = \frac{4}{4} = 1$$

$$y = x + 5$$

$$4 = 1(-1) + b$$
$$4 = -1 + b$$
$$5 = b$$

1.  Which of the graphs of equations shown below are linear and which are nonlinear?

a.      nonlinear

c.      linear

b.      nonlinear

d.      linear

2.  Which of the following equations are linear or nonlinear?
    a.  $36x + 48y = 1600$     linear
    b.  $x^2 + 5 = y$          nonlinear
    c.  $y = \sqrt{25 - x}$     nonlinear
    d.  $y = \frac{4}{3}x - \frac{11}{6}$     linear
    e.  $x = 5$               linear