2. (9 points) Consider the following equations with a and b constants:

(i) $y^5 = ex$ (ii) $y - a^b = b(x-a)^{1/3}(x-a)^{2/3}$

(iii) $y - 2 = \sqrt{x^e}$ (iv) $\pi y = (9/13)^x$

Use the equations to answer the following. (One equation will not be used.)

(a) Which of the above can be written so that y is a linear function of x?

Equation number _____

What is the slope of the function? _____

What is the y-intercept of the graph? _____

(b) Which of the above can be written so that y is an exponential function of x?

Equation number _____

What is the initial value of the function? _____

What is the percent rate of growth/decay of the function? _____

(c) Which of the above equations can be written as a power function of the form $y = kx^p$?

Equation number _____

What is k? _____

What is p? _____