

# Ch. 2 Review - Part I

Name \_\_\_\_\_ Per. \_\_\_\_\_

① Write a transformation equation,  $T(x)$ , for each situation

a)  $y = \sqrt{x}$  after it has been translated 2 left, 5 down, and compressed vertically by 0.2 \_\_\_\_\_

b)  $y = 5^x$  after it has been translated 16 right, 3 down, and stretched vertically by 4. \_\_\_\_\_

c)  $y = \frac{1}{x}$  after it has been translated down 100 and 200 up.

② What is the domain of  $y = \frac{1}{x-4}$ ? \_\_\_\_\_ range \_\_\_\_\_

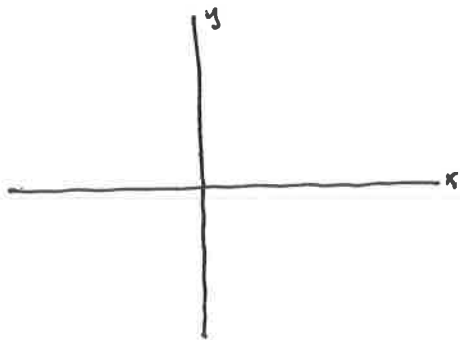
③ Factor the quadratic expression (not solve anything. Just factor).  $10x^2 + 11x - 6$

④ Triangulum (M33) wants to find the exponential function that passes through the points (2, 75.6) and (6, 97977.6). Assuming that the graph has an asymptote at  $y=0$ , what is the equation of the function? Show all of your work!

⑤ Convert to graphing form  $[y = x^2 + 2x - 15]$  by  
(Practice both methods ... Completing the square and Averaging the x-intercepts

Also, find the  
y-intercept.

⑥ Sketch  $y = \frac{1}{x+4} + 5$ . Then specify any asymptotes and their equations.  
Use "HA" for horizontal and VA for vertical



⑦ Solve the system of linear equations

$$4x - y = -13$$

$$3x + 2y = 4$$