Math 146 Test 2 practice problems:

1. Write an equation of a line through points (2,3) and (5,1)

2. a. Write an equation of a vertical line through (1,3) b. Write an equation of a horizontal line through (1,3)

3. Write an equation of a line parallel to 3x+2y=1 through (1,3) b. Write an equation of a line perpendicular to 3x+2y=1 through (1,3)

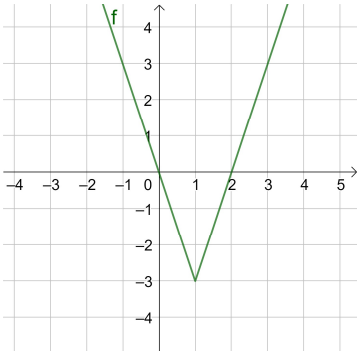
4. Graph each of these functions or relations:

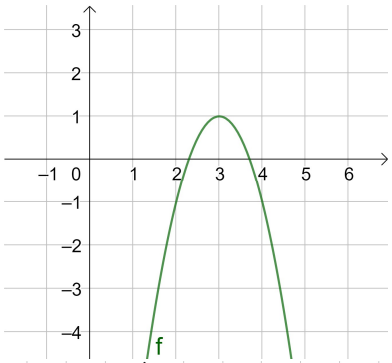
a. $3x+2y=4$ b. $y=\sqrt{-(x+2)}$ c. $y=-2|x-1|+3$ d. $y=\frac{1}{2}(x+2)^2-1$

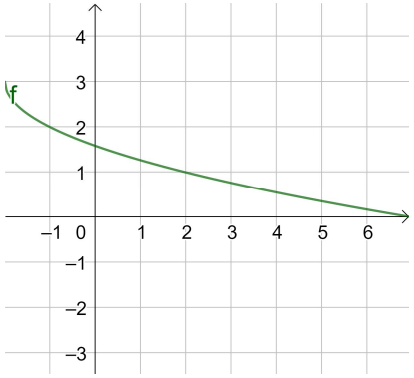
e. $y=-(x+3)^3-1$ d. $(x-2)^2+(y+3)^2=25$

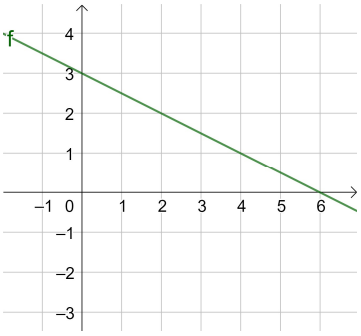
5. Graph the functions a. $y=\begin{cases}2x-3 & \text{if} \quad x\le -2\\ x-1 & \text{if} \quad -2<x<1\\ -2x+1 & \text{if} \quad 1\le x\end{cases}$ b. $y=\begin{cases}\sqrt{-x}+2 & \text{if} \quad x<0\\ 2 & \text{if} \quad 0<x<1\\ 2x & \text{if} \quad 1\le x\end{cases}$

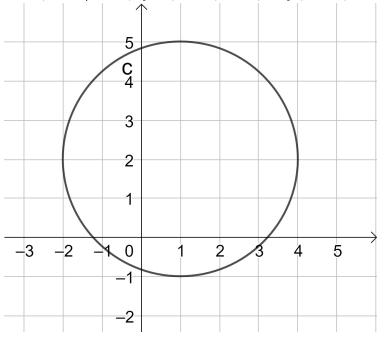
6. Write the equation of each of these functions or relations:



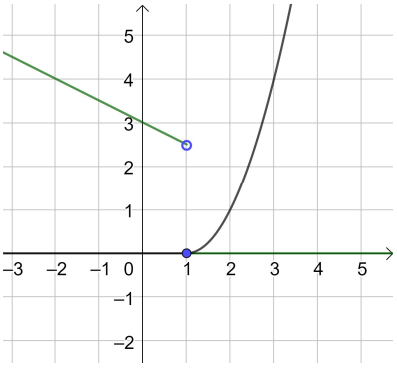


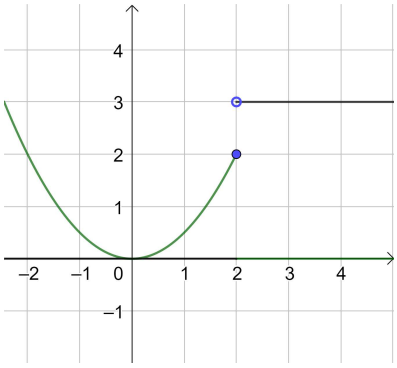






7. Write the equation of each of these functions:





8. Put each of these equations in center-radius or vertex form by completing the square. Tell the center and radius or vertex and graph it.

a. $x^2+y^2-8x-6y+21=0$ b. $y=x^2-2x+3$

9. Find the vertex, axis of symmetry, x-intercepts and y-intercepts for each parabola: 3.1 # 1, 3, and 13-21 odd