MATH 3 Final Review UNIT 1: Parent Functions and Transformations

1. Explain what it means for a relation to be a function.



y-intercept: 3

 $[1,\infty)$

Mincrease/decrease:

(-~,1]





Determine if each function is even, odd, or neither. Explain or show work.





Write the equation of the function that fits the description: 20. Quadratic, vertical stretch by $\frac{1}{2}$, shifted right 3 and down 6 $y = \frac{1}{2}(x-3)^2 - \frac$

- 21. Absolute value, flipped over the x axis, shifted down 5 f(x) = -|x| 5
- 22. Cubic, End Behavior: as $x \to +\infty$, $f(x) \to -\infty$, as $x \to -\infty$, $f(x) \to +\infty$, y-intercept at (0, -7) $y = -x^3 - 7$

23. Quadratic, Range: [-2, +0) y= 3(x+4)2-2 Note: Answers may very; K=-2,a>0

24. Sketch the inverse of the graph shown below on the same coordinate plane:



$$\frac{f(4) - f(-2)}{4 - (-2)} = \frac{35 - ||}{6} = \frac{24}{6} = 4$$

