

Algebra II

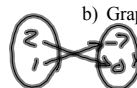
G-5

Inverses

Definition of Inverse

Inverse -

a) Blue Collar Definition - *cancel out, undo each other.*
working person's



b) Graphing Definition - *inputs become outputs, and outputs become inputs*

c) Actual Definition -

Graph: $y = -x^2 + 4$

- (0, 4)
- (1, 3) (-1, 3)
- (2, 0) (-2, 0)
- (3, -5) (-3, -5)

Domain: \mathbb{R}

Range: $(-\infty, 4]$

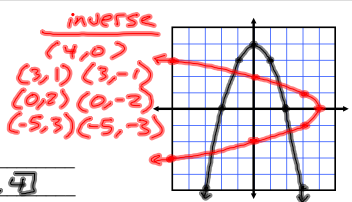
Is this relation a function? Yes

Draw the inverse on the same Cartesian Coordinate System.

Is the inverse a function? No

What is the domain of the inverse? $(-\infty, 4]$

What is the range of the inverse? \mathbb{R}



Assignment: Handout G-5

For each graph:

- a) State whether the graph is a function or not,
- b) Label the Domain and the Range of each relation,
- c) Draw the inverse on the same axes as the original,
- d) State whether the inverse is a function or not,
- e) Label the Domain and the Range of the inverse.