

Unit 2 Summary Sheet

2.1 Functions and Relations

How do you know if a relation is a function by the graph?

How do you know if a relation is a function by the equation?

For $f(x) = \sqrt{x+1}$, what is the domain? _____ what is the range? _____

2.2 Function Notation

For $f(x) = \sqrt{x+1}$, $g(x) = x^2 - 4$

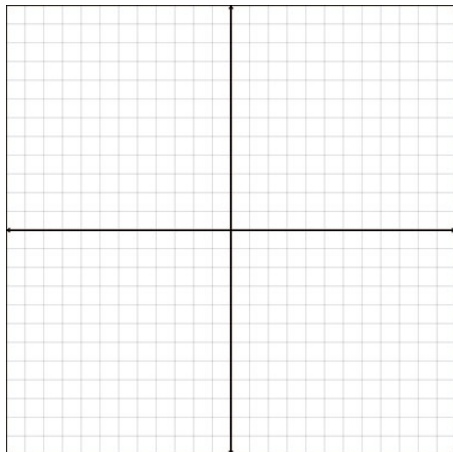
Find the value of $f(3) =$ _____, $g(4) =$ _____

Find the value of x that makes $f(x) = 5$ _____

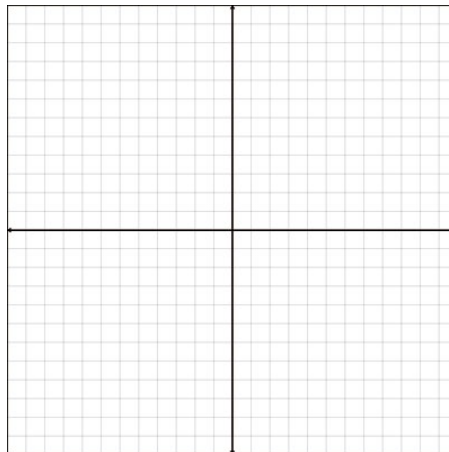
2.3 Function Families

Draw a sketch of the following parent functions:

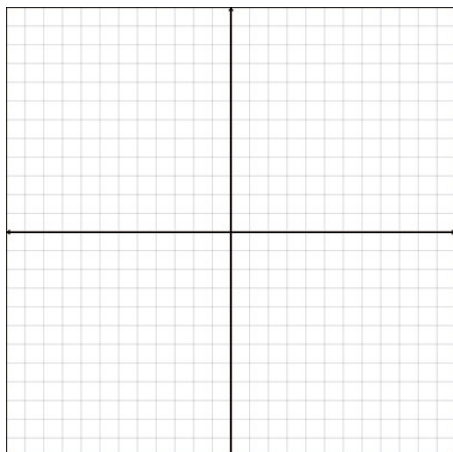
$$y = \sqrt{x}$$



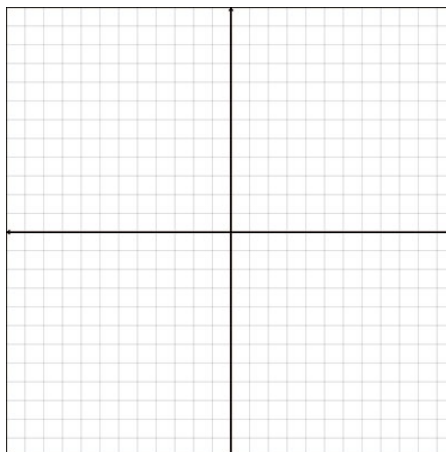
$$y = \frac{1}{x}$$



$$y = |x|$$



$$y = x^2$$



2.4-2.7 Transformations

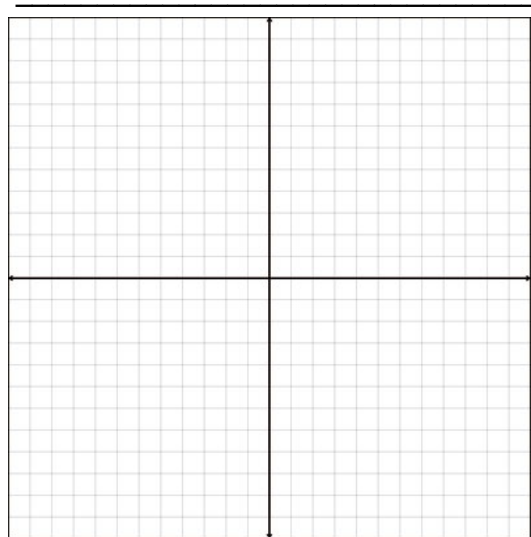
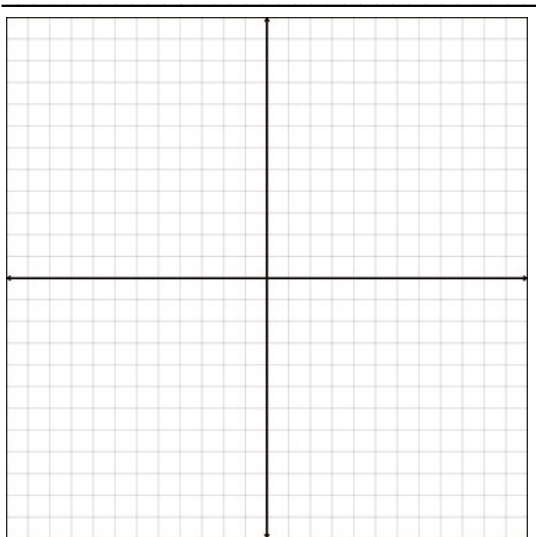
For $y = a f[b(x+h)]+k$ describe how each variable affects the graph of $y = f(x)$

k affects _____, h affects _____

a affects _____ and/or _____

b affects _____ and/or _____

Devise an example with 3 transformations and one with 4 transformations to use as practice



2.8 Inverse Functions

What do you do to generate an inverse function?

Algebraically _____, Graphically _____

For $f(x) = 3x^2 - 5$, state:

Domain of $f(x)$ _____, Range of $f(x)$ _____,

$f^{-1}(x) =$ _____

Domain of $f^{-1}(x)$ _____, Range of $f^{-1}(x)$ _____

Review

p. 76 (pdf 86) #1,2,5,6,8,12,14,15,16,19