

Integrated
Mrs. Verti
room 908

Math 3

Bonita HS
2019-2020

Grading Scale

A+	5.70-6.00	B+	4.70-5.00	C+	3.70-3.00	D+	2.70-2.00	F	0.00-1.99
A	5.30-5.69	B	4.30-4.69	C	3.30-3.69	D	2.30-2.69	*Student needs a C- or higher to move on to the next course.	
A-	5.00-5.29	B-	4.00-4.29	C-	3.00-3.29	D-	2.00-2.29		

6-Point Proficiency Rubric

6 Excellent Understanding (A+) → 100%

- My work shows excellent understanding of mathematical concepts, principles, and their inter-relationships.
- Data analyses and explanations demonstrate a high level of reasoning.

Student thinking: I completely understand this and could do 20 more just like this. I could apply this same concept in a new way. My explanation goes above and beyond to include important vocabulary and justification for my thinking.

5 Strong Understanding (A) → 90%

- My work shows strong understanding of mathematical concepts, principles, and their inter-relationships.
- Data analyses and explanations demonstrate a high level of reasoning.

Student thinking: I completely understand this and could do 20 more just like this. I got the correct answer, but I am missing a piece, unit, label, etc. My explanation has all important vocabulary and provides evidence of my thinking.

4 Good Understanding (B) → 80%

- My work shows good understanding of mathematical concepts, principles, and their inter-relationships.
- Data analyses and explanations demonstrate sound reasoning.

Student thinking: I understand the process but when I do it on my own I make a simple mistake. My explanation is missing vocabulary but clearly describes the situation.

3 Basic Understanding (C) → 70%

- My work shows basic understanding of mathematical concepts, principles, and their inter-relationships.
- Work states facts, draws conclusions, or makes assertions that are incompletely substantiated.

Student thinking: I understand the process but when I do it on my own I make multiple mistakes or leave out steps. My explanation is missing key information but includes some of the necessary elements.

2 Limited Understanding (D) → 60%

- My work shows limited knowledge of mathematical concepts, principles and their inter-relationships.
- Some mathematics may be correctly demonstrated, but evidence of an understanding of broad concepts is lacking.

Student thinking: I can start but then I get stuck. I'm getting there but I need some more practice on this concept. My explanation is incomplete.

1 Minimal Understanding (F) → 50%

- My work shows minimal knowledge of mathematical concepts and does not provide evidence of an understanding of individual facts, concepts, or their interrelationships.
- OR the answer is correct but I did not show any evidence of my thinking.

Student thinking: I tried, but I need a lot of help on this! I'm not even sure how to start the problem.

0 Left Question Blank/ Recopied the Question → 40%

Chapter 1

[5-

Investigations : Functions

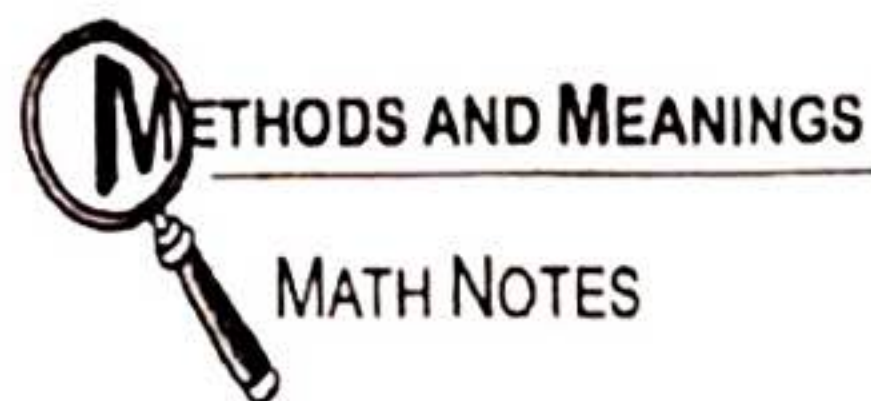
Functions

Be able to identify if a relationship is a function from:

- a graph
- a table
- an equation
- a description

Important Vocab

- function
- domain
- range
- function notation "f(x)"



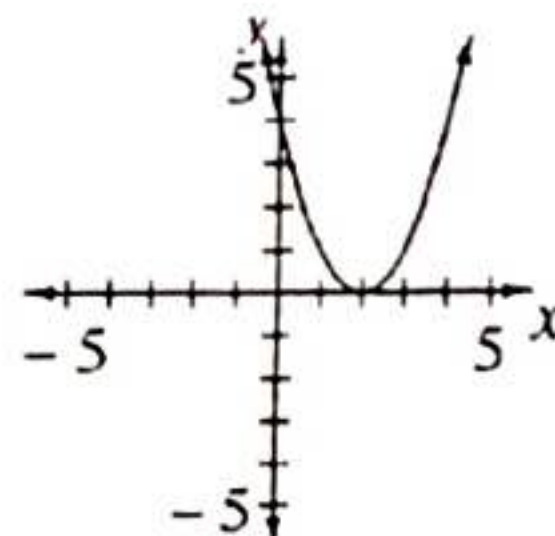
Im1 Review

Functions

A relationship between inputs and outputs is a function if there is exactly one output for each input. Functions are often written as $y =$ (some expression involving x), where x is the input and y is the output. The following equation, table, and graph represent the same function.

$$y = (x - 2)^2$$

x	-2	-1	0	1	2	3	4	5
y	16	9	4	1	0	1	4	9



The set of possible input values for a function is called the domain. This set contains every x -value for which the function is defined. The domain of the function above is all real numbers.

The range of a function is the set of possible output values. This set contains every y -value that the function can generate. As the graph shows, the minimum value of the function occurs at the vertex, where $y = 0$. So the range of the function above is $y \geq 0$.

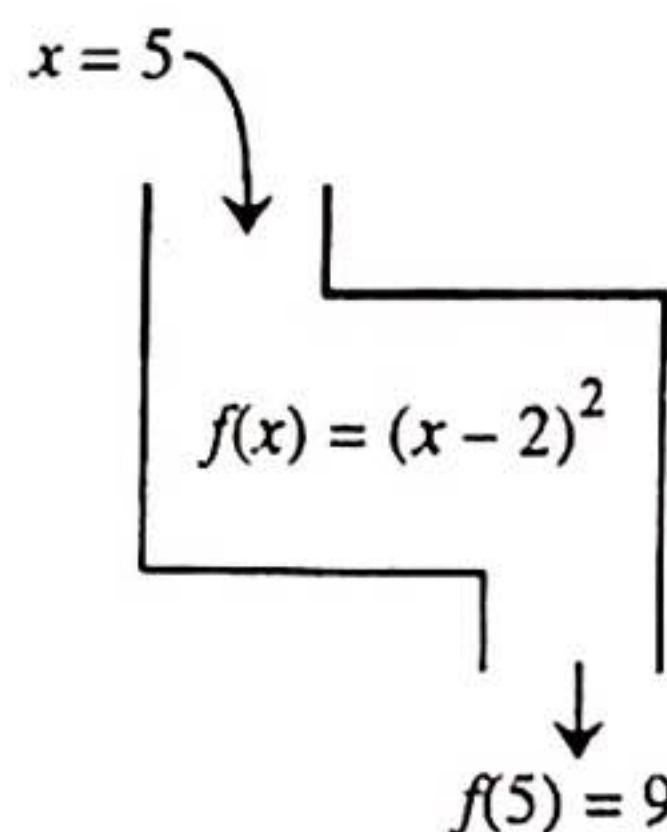
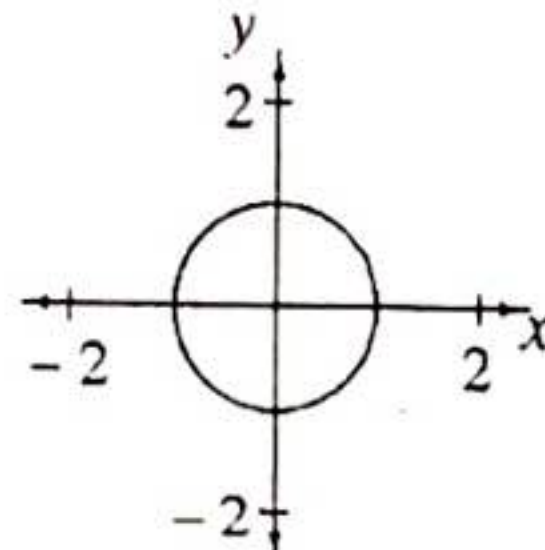
Another way to write a function is with the notation " $f(x) =$ " instead of " $y =$ ". The function named " f " has output $f(x)$. The input is x .

In the example at right, $f(5) = 9$. The input is 5 and the output is 9. You read this as, "f of 5 equals 9."

$x^2 + y^2 = 1$ is not a function because there are two y -values (outputs) for some x -values, as shown below.

$$x^2 + y^2 = 1$$

x	-1	0	0	1
y	0	-1	1	0



Function - relationship b/w inputs and outputs if there is exactly 1 output for each input.

domain - set of possible input values for a function

range - set of possible output values for a function.

Function Notation: " $f(x) =$ " \leftrightarrow " $y =$ "
means the function named " f " has output $f(x)$ when x is input.

Definitions

Notation

① set notation $x \leq 5$ or $x < 5$ or $y \leq -2$ or $y < -2$

② interval notation $(-\infty, 5]$ or $[-7, 10]$

Be able to identify key characteristics of graphs
 * Functions, attributes of a graph

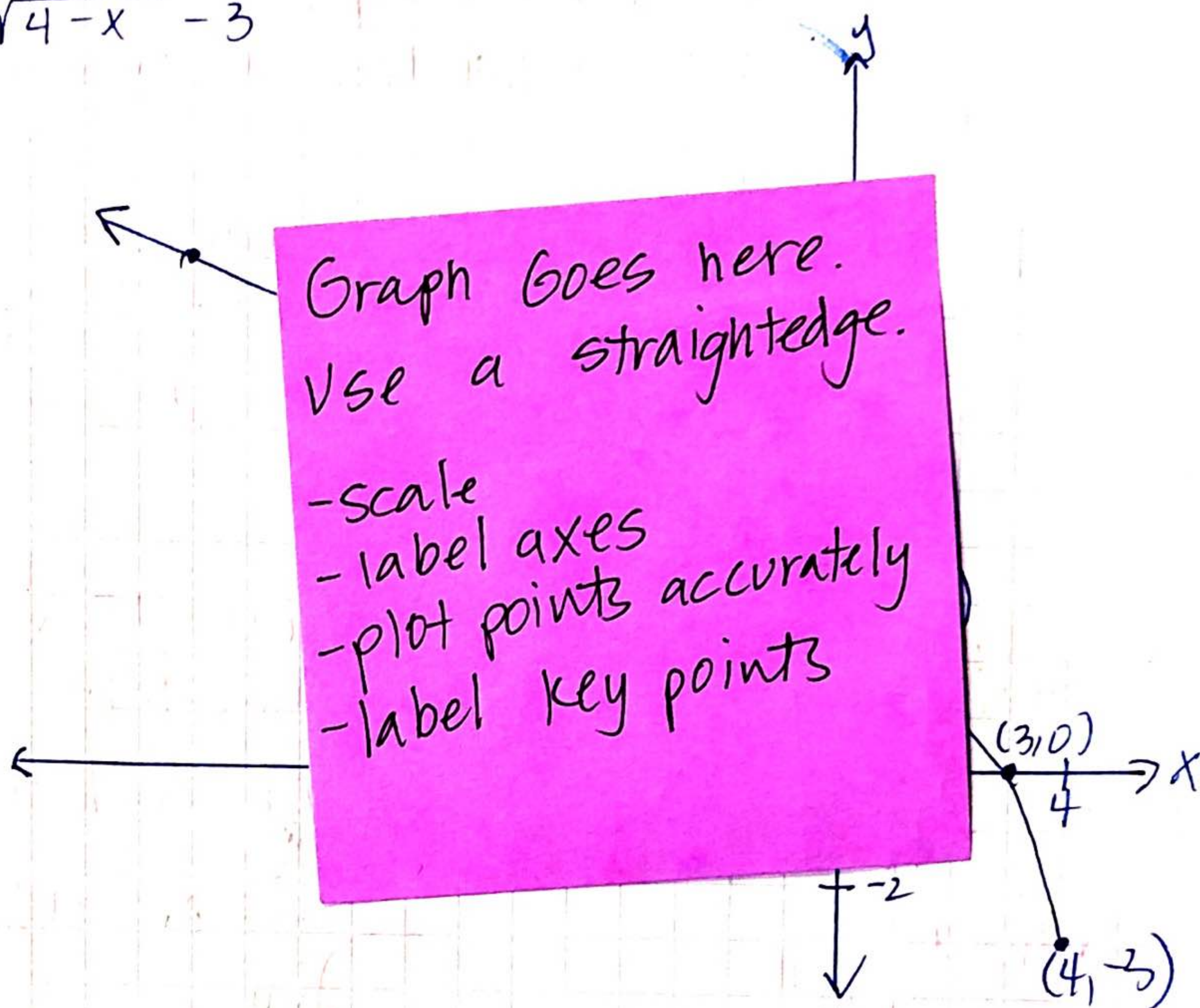
example
 * done in student.desmos.com first.

(13) $y = 3\sqrt{4-x} - 3$

x	y
4	-3
3	0
0	3
-5	6
-12	9

Graph Goes here.
 Use a straightedge.

- scale
- label axes
- plot points accurately
- label key points



Graph Attributes

- shape
- line of symmetry
- opens up/down
- asymptotes
- inc. or dec.
- x & y ints.
- domain & range
- endpoints
- max/min points
- continuous/discrete
- is it a function?

① shape: curve

② line of symmetry

③ opens up/down

④ asymptotes: n

⑤ dec $(-\infty, 4]$

⑥ x-int (3, 0)

y-int (0, 3)

Fully describe graph w/ attributes in 1-13. in this section of page.

domain $x \leq 4$
 or $(-\infty, 4]$

range $[-3, \infty)$
 or $y \geq -3$

key points (4, -3)

opens

⑦ it is a function.

Closure :

What is the difference b/w an x-intercept and a y-intercept?

- 1) x-int is a point on x-axis & y-int a point on y-axis.
- 2) x-int $\rightarrow y=0$. y-int $\rightarrow x=0$.