

Chapter 3 Notes: Functions

Date	Day	Assignment
10/10/23 10/11/23	Tuesday (A) Wednesday (B)	Notes: Start 3.1 Notes In Class: PRISMS Tutorial
10/12/23 10/13/23	Thursday (A) Friday (B)	Notes: Finish 3.1 Notes In Class: PRISMS Lesson HW: 3.1 Worksheet
10/16/23 10/17/23	Monday (A) Tuesday (B)	HW: 3.2 Worksheet
10/18/23 10/19/23	Wednesday (A) Thursday (B)	HW: 3.3 Worksheet
10/20/23 10/23/23	Friday (A) Monday (B)	HW: 3.4 Worksheet
10/24/23 10/25/23	Tuesday (A) Wednesday (B)	HW: Ch 3 Review Worksheet
10/26/23 10/30/23	Thursday (A) Monday (B)	Ch 3 Test No HW 😊
10/31/23 11/01/23	Tuesday (A) Wednesday (B)	HW: 3.2 Worksheet

HW Hints:

- Class website: <https://www.washoeschools.net/Page/18023>
- Check out our class YouTube channel:
<https://www.youtube.com/channel/UCkqqqsceoKE3jFg7YGxTM6Lw>
- Show all work for each problem.
- Students who complete every assignment this semester will get a 2% bonus.
- For extra practice, visit www.khanacademy.org
- Check out www.mathguy.us for extra help.

3.1 Worksheet

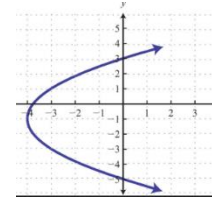
For #1 – 6: Decide (yes or no) if each relation is a function or not.

1) $\{(4,2), (-3,3), (4,1), (5,2)\}$

2)

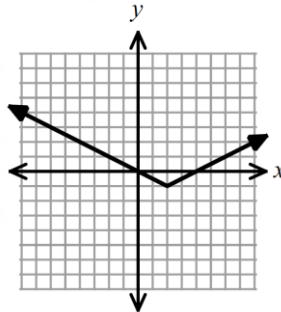
Input	Output
0	0
1	2
4	8
1	2

3)



4) $\{(7,2), (-1,1), (-3,2), (5,5)\}$

5)



6)

Input	Output
3	5
7	8
4	9
3	2

For #7 – 10: What is the domain and range of each function shown?

7) $\{(4,2), (-3,3), (-4,1), (-3,3)\}$

8)

Input	Output
0	0
1	2
4	8
7	2

9)

Input	Output
3	5
7	8
4	9
3	2

10) $\{(7,2), (-1,1), (-3,2), (5,5)\}$

For #11 – 18, $f(x) = -3x + 5$ and $g(x) = 2x + 7$.

11) Find $f(2)$.

12) Find $g(5)$.

13) Find $g(0)$.

14) Find $f(-6)$.

15) Find x if $f(x) = 11$.

16) Find x if $g(x) = -9$

3.1 Self-Reflection

Part A) How well are you understanding 3.1 so far? Consider each topic, and then measure your understanding between 0 (not understanding at all) and 5 (am able to help other students on this topic.)

Topic	Ranking (0 to 5)
Deciding if a relation is a function or not.	
Finding domain and range.	
Using function notation to plug a number into an expression.	
Finding x with functional notation.	

Part B) Evaluate your *effort* on the 3.1 lesson. Include your effort and focus during notes, as well as during the HW time. Share your thoughts below.

Part C) What is your goal for the test on this chapter? Write at least one goal below:

3.2 Worksheet

For #1 – 6: Write a linear function (in slope-intercept form) for the data shown in each table.

1)

x	-1	0	1	2
$f(x)$	-7	-2	3	8

2)

x	$g(x)$
1	10
2	6
3	2
4	-2

3)

x	0	1	2	3
$h(x)$	0	-7	-14	-21

4)

x	$d(x)$
1	8
2	5.5
3	3
4	0.5

5)

x	y
1	-3
2	-8
3	-13
4	-18

6)

x	-1	0	1	2
$f(x)$	10	11	12	13

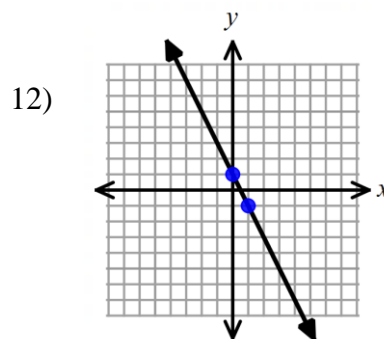
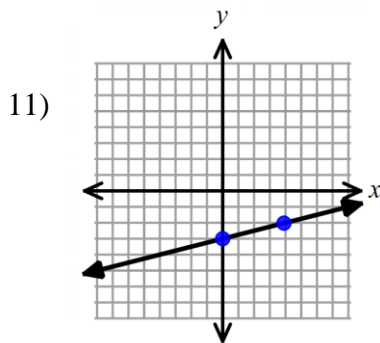
For #7 – 12, write an equation in slope-intercept form for each line described.

7) slope of 3 with a y-intercept of -2

8) y-intercept of 4.5 and a slope of $-\frac{2}{3}$

9) slope of -1 and a y-intercept of 27

10) slope of -6 and y-intercept of $\frac{3}{7}$.



For #13 – 15, use $h(x) = -2x + 5$; $b(x) = 3x - 11$.

13) Find $h(-7)$.

14) Find $b(0)$.

15) Find $h(2) + b(-1)$.

3.2 Worksheet

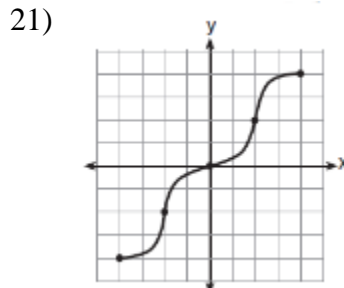
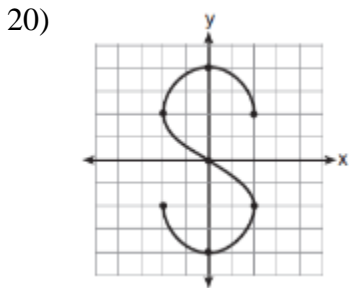
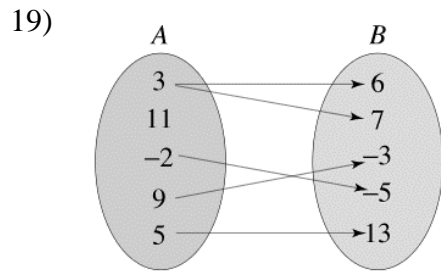
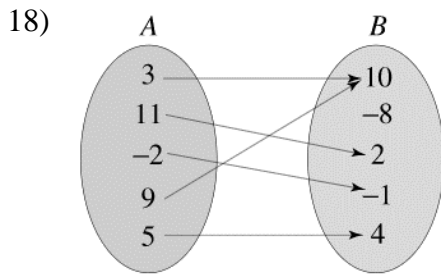
For #16 – 17, find the domain and range.

16) $\{(4,2), (-3,3), (-4,1), (-2,3)\}$

17)

x	-1	0	1	2
$f(x)$	-7	-2	3	8

For #18 – 21, decide (“yes or no”) if each relation is a function or not.



3.2 Reflection:

A) What did you understand well from the 3.2 lesson?

B) What do you need additional clarification from on the 3.2 lesson?

C) What resources can you use to get the help you need to be successful in this class?

3.3 Worksheet

For #1 – 8, write the equation of the line described in (h, k) form.

1) passes through $(5, -2)$ and has a slope of $\frac{1}{3}$

2) has a slope of -4 and passes through $(-1, 7)$

3) has a slope of $\frac{5}{6}$ and passes through $(0, 9)$

4) passes through $(-2, -1)$ and has a slope of 8

5) passes through $(6, -3)$ and has a slope of -1

6) has a slope of $-\frac{2}{3}$ and passes through $(-9, 8)$

7) contains $f(4) = 8$ and has a slope of -3

8) has a slope of $-\frac{5}{3}$ and contains $f(-3) = 0$

9) Use the equation that you wrote for #2. Convert this equation to slope-intercept form.

10) Use the equation that you wrote for #5. Convert this equation to slope-intercept form.

11) Use the equation that you wrote for #4. Convert this equation to slope-intercept form.

For #12 – 13, write an equation to model each situation.

12) A electrician charges a one-time fee of \$80, plus \$60 per hour. Use c for the total cost and h for the number of hours.

13) You hire a limo who charges \$20 per mile, along with a flat fee of \$150. Use T for the total cost and m for miles driven.

3.3 Reflection

A) What level of frustration did you experience while doing this assignment?

0

1

2

3

4

No frustration

A small amount of frustration

Frustrated half the time

Frustrated most the time

Frustrated all of the time

B) How confident were you on each of the following portions of the assignment? Use the scale below.

0

1

2

3

4

Not confident

Slightly confident

Confident half the time

Confident most the time

Confident all of the time

Portion	Confidence Scale Value
Writing an equation in (h, k) form	
Converting from (h, k) form to slope-intercept form	
Write an equation to model a situation	

C) Answer the questions below.

Did you use any resources on this assignment to help you be successful?	
List the resources you used, if any. Some options can include referencing your notes, using a calculator, asking a friend or family member for help, or finding a video on the internet to help you.	

D) Are you proud of your effort on this assignment? Why or why not?

E) List a goal for your next assignment.

3.4 Worksheet

1) Write the equation of the line, in (h, k) form, that passes through $(8, 5)$ and $(10, 11)$.

2) Convert your answer from #1 to slope-intercept form.

3) Write the equation of the line, in (h, k) form, that passes through $(-3, 2)$ and $(-2, 9)$.

4) Convert your answer from #3 to slope-intercept form.

5) Write the equation of the line, in (h, k) form, that passes through $(4, -3)$ and $(2, -5)$.

6) Convert your answer from #5 to slope-intercept form.

3.4 Worksheet, continued

7) Write the equation of the line, in (h, k) form, that passes through $(-6, 1)$ and $(2, -3)$.

8) Convert your answer from #7 to slope-intercept form.

3.4 Reflection

A) **How much do you agree with this statement?** I showed persistence on this assignment, because I tried the problems that were hard for me, and I gave my best effort even when it was challenging.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

B) **How much do you agree with this statement?** When I felt frustrated on this assignment, I was able to calm myself down and then focus on trying the problems.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

C) **How much do you agree with this statement?** When I needed help on this assignment, I used **appropriate** resources (such as my notes, watching a video, getting help from others) to try to understand the material.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

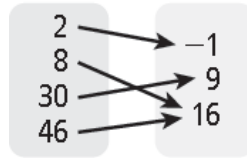
D) Are you proud of your effort on this assignment? Why or why not?

Ch 3 Review Worksheet

For #1 – 2: Identify the domain and range of the relation.

1) $\{(2,3), (5,3), (-2,1), (-3,2)\}$

2) $x \qquad y$

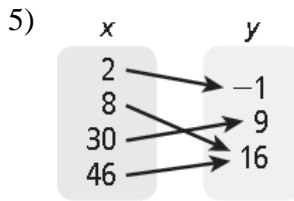


For #3 – 6, determine if each relation is a function or not. Answer “yes” or “no”.

3)

x	y
0	1
2	2
4	4
6	7

4) $\{(1, 2), (3, 4), (1, 5), (4, 6)\}$



6)

x	y
6	1
2	3
5	4
6	1

For #7 – 10: Use this information: $f(x) = -5x + 3$ and $g(x) = -2x - 3$, find each value.

7) $f(2)$

8) $g(-3)$

9) Find x if $f(x) = -3$.

10) Find x if $g(x) = 7$.

For #11 – 12: Write the equation of the line, in (h, k) form, that passes through the given point and has the given slope.

11) contains $(-2,5)$, slope = -3

12) contains $(7, -6)$, slope = 5

13) Convert your answer from #11 to slope-intercept form.

For #14 – 15, write the equation of each line shown by the data in the table. Write your answer in slope-intercept form.

14)

x	1	2	3	4	5	6	7
y	8	10	12	14	16	18	20

15)

x	0	1	2	3	4
y	32	22	12	2	-8

Ch 3 Review Worksheet, continued

For #16 – 17, write an equation to model each situation:

16) A t-shirt company charges a set-up fee of \$20, plus \$17 per t-shirt ordered. Use y for the total cost and x for the number of t-shirts ordered.

17) Andrea is keeping track of how many miles she runs. So far, she has run 11 miles, and she plans to run an additional 3 miles each day. Use T for the total number of miles run, and d for the number of days she is going to continue running.

For #18 – 20, write the equation of the line, in (h, k) form, that passes through the given points.

18) through $(6, 10)$ and $(2, 18)$

19) through $(-7, 4)$ and $(1, -2)$

20) through $(-5, -3)$ and $(-8, -9)$

21) Convert your answer from #20 to slope-intercept form.