

**OLSEN – ADVANCED ALGEBRA UNIT 2 ACTIVITY 5 HOMEWORK**

Name \_\_\_\_\_ Period \_\_\_\_\_

**LESSON 5-1 HW: page 79-80, “ACTIVITY 5 PRACTICE” problems 1 – 11.**

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	

**LESSON 5-2 HW: page 75, “LESSON 5-2 PRACTICE” problems 11 – 15 and page 80 “ACTIVITY 5 PRACTICE” problems 12 – 14.**

11.	12.
13.	14.
15.	12.
13.	14.

**LESSON 5-3 HW: page 80, "ACTIVITY 5 PRACTICE" problems 15 – 21.**

15.

16.

17.

18.

19.

20.

21.

## ANSWER KEY:

### ACTIVITY PRACTICE

1. A1, A2, B1, B2, C1, C2, D1, D2
2. coffee, chai, juice, cocoa, iced tea, latte, water mocha
3. C
4. B
5. water
6. 2B
7. The first relation is a function, because each input has exactly one output. The second relation is not a function, because the input 5 has 2 outputs.
8. The first relation is not a function, because the input  $-2$  has 2 outputs. The second relation is a function, because each input has exactly one output.
9. The first relation is not a function, because the input 5 has 2 outputs. The second relation is a function, because each input has exactly one output.
10.  $x = 0, 1, \text{ or } 2$ ; these  $x$ -values already appear in the domain of the function, and none of them are matched with a range value of 7. Therefore, if  $x$  were to equal one of these numbers, then there would be a domain value with more than one range value.
11. Yes; because every  $x$ -value (input) is matched with exactly one  $y$ -value (output).

### LESSON 5-2 PRACTICE

11. Domain:  $\{2, 5, 7\}$ ; Range:  $\{2.3, 15\}$

12. Domain:  $\{-0.3, \frac{1}{6}, 1.5\}$ ;  
Range:  $\{3, 4, 8\}$

13. a.  $\{5, 10, 15, 20\}$

b.  $\{3, 8, 11, 16\}$

14.

$x$	$y$
$-1$	$1$
$0$	$1$
$\frac{1}{2}$	$\frac{7}{4}$
$1.2$	$3.64$

15. a.  $\{(-1, -4), (3, 12), (\frac{1}{2}, 2), (0.4, 1.6)\}$

b.  $\{(-1, 1), (3, -7), (\frac{1}{2}, \frac{7}{4}), (0.4, 1.84)\}$

### ACTIVITY PRACTICE

12.  $\{-4, -1, 0, 4\}$

13.  $\{-5\}$

14. Yes; because every  $x$ -value (input) is matched with exactly one  $y$ -value (output).

15.  $f(x) = x^2 - 5x + 8$

16. 22

17. 0

18. 1

19. 1

20. 5

21. The mapping diagram represents a function because each domain value is paired with exactly one range value. It doesn't matter that each domain value is paired with the same range value, as long as no domain value is paired with more than one range value.