2.1 Corrective Assignment – Function Intro

For 1-4, identify if the relationship represents a function. If it does not, clearly explain why not.

1) | Independent | Dependent |
---|---|
-13 | 0 |
-5 | 4 |
2 | 0 |
3 | 4 |

2) | Domain | Range |
---|---|
-5 | 0 |
-2 | 2 |
10 | 3 |
-5 | 1 |

3) The ordered pairs:
   - (−7, 1), (5, −40),
   - (1, 5), (−4, 2), and (5, 8).

4) \( f(0) = 1, f(1) = 0, \)
   \( f(2) = 1, f(3) = 0, \) and
   \( f(1) = 0. \)

For 5-8, identify the independent (input) variable and the dependent (output) variable.

5) A person’s name depends on their social security number.
   - Dependent: Name
   - Independent: Social Security Number

6) The distance from the sun determines the name of the planet.
   - Dependent: Name
   - Independent: Distance from the Sun

7) A student’s grade is a function of the number of tests they have passed.
   - Dependent: Grade
   - Independent: Number of Tests Passed

8) The number of hours practicing helps determine a basketball player’s free throw percentage.
   - Dependent: Free Throw Percentage
   - Independent: Hours Practicing

For 9-11, write a sentence explaining the meaning of the specific numbers given for each scenario.

9) The input of a function \( P \) is the number of shirts the Student Council sells at lunch. The output is the profit earned in dollars. What does \( P(15) = 85 \) mean?

10) The input of a function \( D \) is the amount of Round-Up (in liters) Mr. Bean sprays on his weeds. The output is the number of dead weeds. What does \( D(4) = 179 \) mean?

11) The postage paid (in cents) for mailing a letter is a function of its weight in ounces. What does \( P(26) = 78 \) mean?

For 12-15, use the graph given for each problem to determine the values. If the value is between two integers, approximate to one decimal place.

12) \( f(3) = \)
13) \( f(2) = \)

b. \( f(−4) = \)
b. \( f(0) = \)

c. If \( f(x) = 1 \), then \( x = \)
c. If \( f(x) = 1 \), then \( x = \)
d. If \( f(x) = 0 \), then the possible value(s) of \( x \) are:
d. If \( f(x) = 0 \), then the possible value(s) of \( x \) are:
14) 
   a. \( f(1) = \)  
   b. \( f(-3) = \)  
   c. If \( f(x) = 1 \), then \( x = \)  
   d. If \( f(x) = 0 \), then the possible value(s) of \( x \) are:  

15) 
   a. \( f(-2) = \)  
   b. \( f(3) = \)  
   c. If \( f(x) = -1 \), then \( x = \)  
   d. If \( f(x) = 0 \), then the possible value(s) of \( x \) are:  

For 16-21, state whether or not each graph represents a function.

16)  
17)  
18)  
19)  
20)  
21)  

Answers to 2.1 CA

1. Yes, it is a function.  
2. No, the domain value of -5 has two different range values.  
3. No, the domain value of 5 has two different range values.  
4. Yes, it is a function.  
5. Dep: Person’s name  
   Ind: SSN  
6. Dep: Distance from sun  
   Ind: Name of planet  
7. Dep: Student’s grade  
   Ind: # of passed tests  
8. Dep: # of hours practicing  
   Ind: FT %  
9. When 15 shirts are sold, the student council makes $85.  
10. If 4 liters of Round-Up is sprayed, there are 179 dead weeds.  
11. If a letter weighs 26 ounces, it costs 78 cents in postage.  
12. 
   a. -4  
   b. -1  
   c. -2  
   d. -3, -1  
13. 
   a. 4  
   b. 2  
   c. 0.5  
   d. 0.8  
14. 
   a. 0.8  
   b. 0  
   c. -1.5, 1.5  
   d. -3, 0, 3  
15. 
   a. -1.2  
   b. 1  
   c. -1  
   d. 2  
16. Yes  
17. No  
18. No  
19. No  
20. Yes  
21. Yes