Module 2 Topic 1 Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

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| 1. | Rewrite the explicit formula in function form. Then identify the y-intercept of the function.  an = 5 + 0.2(n - 1) |
| 2. | Determine whether each table of values represents a linear function. For those that represent linear functions, write the function. For those that do not, explain why not.   1. b. |
| 3. | An elevator in a high-rise building moves upward at a constant rate. The table shows the height of the elevator above the ground floor after various times.     1. Determine the average rate of change for the problem situation. Be sure to include units of measure. 2. Write a function that models the table of values. Define your variables. 3. Determine the height of the elevator at 14 seconds. |
| 4. | Use the graph to determine when f(x) = 5 and the value of f(2). |
| 6. | Evaluate the function f(x) = 31.572x - 17.741 at each of these values.   1. f(6.2) b. f(-27.018) |
| 7. | Given the graph of f(x), graph f(x) + 4 |
| 8. | Rewrite each explicit formula in function form.   1. an = 19 - 7(n - 1) 2. an = 1.5 + 4.2(n - 1) |
| 9. | A tree is currently 8 feet tall and grows 3 feet per year.   1. Model this scenario with an arithmetic sequence in explicit form. 2. Rewrite the explicit form of the sequence using function notation. 3. How tall will the tree be in 12 years? |
| 10. | Use the graph to determine when f(x)=-4 and the value of f(9) |
| 11. | Determine whether each table represents a linear function. For those that represent linear functions, write the function. For those that do not, explain why not.   1. b. |
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| 12. | A faucet leaks water at a constant rate. Tara places a measuring cup under the leak to catch the water. The table shows the number of milliliters of water in the cup at different times.     1. Determine the average rate of change for the problem situation. Be sure to include units. 2. Write a function to model the table of values. 3. Determine the amount of water in the cup after the faucet leaks at a constant rate for 12 hours. |
| 13. | Using the graph below, how many gallons of gas can be purchased for $15.80? |
| 14. | Use the graph to determine when f(x)= 4 and the value of f(-8). |
| 15. | For each of the following, a function has been given along with its graph. Perform the specified transformation of the function and graph. |
| 16. | Rewrite each explicit formula in function form.   1. an = 12 - 6(n - 1) b. an = 3.5 + 2.8(n - 1) |
| 17. | Determine whether each table represents a linear function. For those that represent linear functions, write the function. For those that do not, explain why not.   1. b. |
| 18. | A faucet leaks water at a constant rate. Andrea places a measuring cup under the leak to catch the water. The table shows the number of milliliters of water in the cup at different times.     1. Determine the average rate of change for the problem situation. Be sure to include units. 2. Write a function to model the table of values. 3. Determine the amount of water in the cup after the faucet leaks at a constant rate for 11 hours. |
| 19. | Use the graph to determine when f(x) = 7 and the value of f(5). |