HW #111, Practice review for Test #102

Work all problems out on your own notebook paper showing all work required and box in your answers.

1. Remember, this is NOT strictly a completion grade. As with any assignment, you get full credit for problems worked correctly and any problems missed that are corrected clearly, and no credit for problems that you did not work or work was not shown.
2. When you arrive in class on test day, this assignment needs to be graded and ready to hand in.
3. After grading this assignment, be sure to re-work any problems that you missed. I**F YOU SKIP THIS STEP, YOU ARE COMPLETELY MISSING THE POINT OF THE REVIEW AND CONSEQUENTLY WILL NOT BE SUFFICIENTLY PREPARED FOR THE TEST!**
4. It is strongly advised that you begin this review the day that it is assigned and complete it as early as possible so that you have sufficient time to get help on any problems with which you have difficulty.

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| 1. Write an Arithmetic Sequence Equation for the *n*th term of the pattern and find .   **-5, 6, 17, 28, ……** | | |
| Classify #2 – 4 as being discrete or continuous data for graphing | | |
| 2) The time you get up each morning for twenty days | 3) Temperature throughout the week. | 4) High temperature throughout one week every day. |

For problems #5 – 6, first **define two variables x and f(x)**. Identify which is **dependent** and which is **independent**. Tell if the graph would be **continuous or discrete**. **Write a function rule in function notation**.

5) Home Depot rents out forklifts to its customers for an initial fee of $35 plus $25 per hour and charge in whole hours only. They limit the rental to not exceed 8 hours.

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| Define 2 variables:  Ind:( ) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Dep:( ) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Function rule in **function notation**:  Reasonable Domain:  Reasonable Range: | How many hours did someone rent the  forklift if they were charged $160.00  Sketch a graph and label axis  Discrete or Continuous |

6) A 12 inch candle is lit and burning away at a constant rate of one half inch every hour.

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| Define 2 variables:  Ind:( ) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Dep:( ) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Function rule in **function notation**:  Reasonable Domain:  Reasonable Range: | | | What height is the candle at after 6  hours?  Discrete or Continuous |
| 7) If , find | | 8) For, what is the value of *x* if | | |
| For #9 - 10, do ALL of the following: a) Write a sentence in the form \_\_\_\_ is a function of \_\_\_\_; b) define the dependent and independent variables; c) state the domain and range, being sure to distinguish between discrete and continuous and d) determine the slope from the given information | | | | |
| 9) A fitness class is being offered twice a week for four weeks. The registration fee is $8.00 and the cost for each class is $4.50. | | | | |
| 10) A limosine service charges $2.00 per mile and a flat fee of $50. The mileage cannot exceed 100 miles. | | | | |
| For each graphed line below #11 – 13; a) give the *x*- and *y*- intercepts as ordered pairs; b) state the slope of the line; and c) use slope-intercept form to write the equation of each line. | | | | |
| 11)  12)  13) | | | In #14 – 15, tell whether the given equation or table satisfy a linear function. EXPLAIN.  14)  15)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | 1 | 4 | 7 | 11 | | *y* | −1 | −2 | −3 | -5 | | |

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| In #16, set up a table and graph the following function: | | |
| 16)  Show your table and list at least four point, then graph correctly. | | |
| For # 17 - 20, do all of the following: a) determine if the relation is a function; b) explain why or why not; c) state the domain and range. | | |
| 17) | 18)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | 4 | 4 | 4 | 4 | | *y* | −1 | −2 | −3 | 2 |   **a) What is the slope of the line created by this table?** | 20) *y*  *x* |
| 19) {(−2, 4), (0,0), (1, 2), (2,4)} |
| 21) Determine the slope of this linear equation: | 22) Determine the slope of the line that contains the points (15, 6) and (-15, 6). | |  |  | | --- | --- | | *x* | *f(x)* | | -5 | 17 | | 0 | 11 | | 5 | 5 | | 10 | -1 |   23) Write the slope-intercept form of the equation that is represented by this table: |
| 24) The graph to the right represents the functional relationship showing the  price of T-shirts over number of shirts bought.   1. Write the function rule modeling this graph. 2. What are the y-intercept and the x-intercept **and** explain the MEANING   of these points in the TA: C:\cur_proj\July 2014\AB art\book\Arts\PNGs\HSAlg1_ab_0300_022.pngcontext of the situation.   1. What is the slope **and** explain the MEANING of the slope in the   context of situation.   1. Find *f(60)* and explain the meaning of your answer in the context of this   situation. | | |