Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_\_\_\_\_\_

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| Create A Function Rule Worksheet |

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| 1. You went shopping at Fairlane Mall and bought a pair of jeans for $25.00 and spent $20 per shirt. Write a rule to describe the total cost, f(x), and amount of shirts, x. a) What is the function rule? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b) What would be the total cost if you bought 15 t-shirts? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2. The Class of 2016 donated a tree to HFEC and it was 10 centimeters tall when it was first planted. Since then, it has grown approximately 0.50 centimeters per day.a) Write a rule to describe this function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b) After 90 days how tall will the tree be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_c) \*Challenge\* After how many days will the tree be 18 centimeters tall? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3. A t-shirt company charges a $30 screening fee and $8 for each t-shirt we want printed.a) Create a function rule to describe this situation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b) What is our total cost if we bought 657 t-shirts for the freshmen class? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

4. Joseph is in the business of repairing home computers. He charges a base fee of $45 for each visit and $25 per hour for his labor. Create a function rule to show the relationship between the total cost, f(x), and hours, x.

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| 1. Function Rule : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2. What did you define the variables:  x: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & y: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3. Complete the table

|  |  |  |  |
| --- | --- | --- | --- |
| **X** |  | **Y** | **(x,y)** |
| 0 |  |  |  |
| 2 |  |  |  |
| 4 |  |  |  |
| 6 |  |  |  |
| 8 |  |  |  |

 | 4. Graph. Make sure axis’ are labeled, intervals are accurate, and line is neat. |
| 5. Answer the following questions:**MUST USE COMPLETE SENTENCES & SHOW WORK ON THE BACK**a) Which direction is your graph going?b) Where does the graph intersect the y-axis?c) What would be unreasonable data for this problem? | d) What would be the total cost be if Joe worked 20 hours? e) What would be the total cost be if Joe worked 15 hours?f) How can you use the graph to help you find the answers to d & e?g) ☺ ☺ How many hours would Joe have to work if he made $220? |