Functions 1a - What is a Function?
HW\#4
*CHRISTMAS... Do HW on this sheet!

Name
Per $\qquad$ Date $\qquad$

Decide whether each of the following represents a function and either describe or create a table of values to show what the domain and range might be. For each non-function explain why it fails to be a function.

1. Your weight (output) the number of weeks (input) after starting a new diet and fitness program. Assume you were on the program for several weeks and lost weight at a constant rate of 2.5 pounds per week.
2. The time (output) at which you were traveling 10 mph (input) when you drove from home to the store and back home.
3. The total cost (output) for parking in a garage that charges by the hour (input). One particular parking garage charges $\$ 3$ per hour (a fraction of an hour is charged as a whole hour).
4. The time (output) in seconds after removing your food from the microwave when your food is at a specific temperature (input). For example, considering an input value of 100 degrees, at what time (output) would your food be at that temperature.
5. Fill in each row in the following table by placing an $X$ in the appropriate cell depending on whether each table, graph, or description given below represents a function. For each choice of "No," explain why it fails.
A. The speed you are traveling at each time in a foot race.
B.

| $x$ | $y$ |
| :--- | :--- |
| 1 | 5 |
| -1 | 3 |
| 7 | 10 |
| -2 | 3 |
| 15 | 6 |
| 8 | 5 |
| 0 | 4 |

C.

| $x$ | $y$ |
| :--- | :--- |
| 1 | 5 |
| 2 | 6 |
| 5 | 7 |
| 1 | 8 |
| 3 | 9 |
| 6 | 0 |
| 1 | -1 |


|  | Yes | No |
| :---: | :---: | :---: |
| A |  |  |
| B |  |  |
| C |  |  |
| D |  |  |

D.


