**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Relations and Functions**

**Tell whether each is a function or not. Write yes or no.**

1.

|  |  |
| --- | --- |
| *x* | *y* |
| 0 | 9 |
| -8 | 3 |
| 2 | -6 |
| 1 | 4 |



1.
2. 
3. 

**Write the domain and the range of the following relations. Then identify whether it is a function or not (Yes or No).**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Earth moves at a rate of 30 kilometers per second around the Sun. The equation relates the distance *d* in kilometers Earth moves to time *t* in seconds.
	1. Find the range when the domain is .
	2. What is the distance traveled by the sun after 120 seconds?
	3. How many seconds will it take for the sun to travel 540 kilometers?
2. Evaluate the function , for and

**Find the range of the following given its domain. Show your work. Make a table for your answers. For numbers 9 and 14, show your work on the space.**

|  |  |  |
| --- | --- | --- |
| ***x*** |  | (x, y) |
| -3 |  |  |
| -2 |  |  |
| 0 |  |  |
| 1 |  |  |
| 5 |  |  |

|  |  |  |
| --- | --- | --- |
|  |  | (x, y) |
| *f(-6)* |  |  |
| *f(-4)* |  |  |
| *f(-2)* |  |  |
| *f(0)* |  |  |
| *f(4)* |  |  |

|  |  |  |
| --- | --- | --- |
|  |  | (x, y) |
| *g(-10)* |  |  |
| *g(-5)* |  |  |
| *g(0)* |  |  |
| *g(5)* |  |  |
| *g(10)* |  |  |

|  |  |  |
| --- | --- | --- |
| ***x*** |  | (x, y) |
| -3 |  |  |
| -2 |  |  |
| -1 |  |  |
| 1 |  |  |
| 2 |  |  |

|  |  |  |
| --- | --- | --- |
| ***x*** |  | (x, y) |
| -5 |  |  |
| -2 |  |  |
| 0 |  |  |
| 2 |  |  |
| 3 |  |  |

|  |  |  |
| --- | --- | --- |
|  |  | **(x, y)** |
| *h(0)* |  |  |
| *h(1)* |  |  |
| *h(2)* |  |  |
| *h(3)* |  |  |
| *h(4)* |  |  |