$\qquad$ Period: $\qquad$ Due Date: February 25, 2019
(MATH 5)

## Exponentials Homework \#6

Directions: Fill in each table, write exponential functions, and graph the functions based on the following word problems.

1. Saul and Luis are going to start summer businesses mowing lawns for their next-door neighbors. Saul will start by charging each neighbor $\$ 5$ for the first time and will increase by $25 \%$ more each time he mows their lawn. Luis will start by charging each neighbor $\$ 5$ for the first time and will increase by $\$ 2$ more each time he mows their lawn.

| Number of Times Mowed | Saul's Income | Luis' Income |
| :---: | :---: | :---: |
| 1 | $\$ 5$ | $\$ 5$ |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 15 |  |  |

$\mathrm{s}(\mathrm{x})=$ $\qquad$ $1(x)=$ $\qquad$

2. Julian had to take 400 mg of ibuprofen (Advil, Motrin, or pain medicine) at 8:00 am when he got a massive head ache. According to the internet, the half-life of this medicine is 2 hours.

| Number of Hours since 8 am | Mg of Ibuprofen left |
| :---: | :---: |
| 0 | 400 |
| 2 |  |
| 4 |  |
| 6 |  |
| 8 |  |
| 10 |  |
| 20 |  |

$$
m(x)=
$$

$\qquad$


Directions: Graph the exponential functions.

1. $f(x)=2^{x}$
2. $g(x)=(1 / 2)^{x}$


