**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U6 HWK #4** *Write Equations to Solve Real-world Problems*

**Directions:** Write the equation for each of the following real-world problems.

|  |  |
| --- | --- |
| 1. The graph below shows the descent of an airplane where *x* is time (in minutes) since the plane started its descent and *y* is the altitude (in feet) of the plane. Label the axes of the graph.

Equation: Use the graph and equation to tell the story of this airplane. | 1. The graph below shows the length of a boa constrictor where *x* is time (in weeks) since the boa constrictor’s birth and *y* is length (in inches). The boa constrictor was 30.4 in. at 8 weeks and 49.6 in. at 32 weeks. Label the axes of the graph.

 **(32, 49.6)****(8, 30.4)**Equation: Use the graph and equation to tell the story of this boa constrictor. |
| 1. The table below shows the amount of money Lance has in his savings account where *x* is time (in months) and *y* is the account balance (in dollars).

|  |  |
| --- | --- |
| *x*(time) | *y*(account balance) |
| 0 | 160 |
| 3 | 385 |
| 6 | 610 |
| 9 | 835 |

Equation: Use the table and equation to tell the story of Lance’s savings. | 1. The cost to rent a jet ski is $80 per hour. In addition, there also includes fee for a lesson on how to use the jet ski. Steve rented a jet ski for 3 hours and the total bill was $265. Write the equation for the total cost of renting a jet ski *y* for *x* hours.

Equation: Use your equation to add more details to the story about renting a jet ski. |
| 1. In order to make the playoff a soccer team must get 20 points during the regular season. The team gets 2 points for a win and 1 point for a tie. A team earns just enough points to make the playoffs. Let *x* represent the number of wins and *y* represent the number of ties.
2. Write an equation to relating the all the possible values of *x* and *y* that will let the team make the playoffs.
3. Write the equation in Slope-Intercept Form.
4. If the team wins 8 games, how many tie games will need to occur?
 | 1. The cost of a party at The Little Gym is $250 which includes cake, pizza, and admission for any number of children. Create the graph and equation of this situation where *x* is the number of children and *y* is the total cost.

Equation:  |