Name_____ Group_____

Linear and Rational Functions Assignment

1.	**The cost of a membership at World Gym includes an initial sign-up fee as well as a monthly fee. The initial sign-up fee is $300 and the cost per month is $15.**
	a. What do the variables represent in this scenario? Which is x and which is y?
	b. Write a rule to determine the total amount paid to World Gym (based on the number of months a person has been a member).
2.	**Each week, a store employee earns a fixed amount plus a commission (a percentage) of the total amount they sold (in $). The employee earns $300 plus a commission of 15% of their total sales.**
	a. What do the variables represent in this scenario? Which is x and which is y?
	b. Write a rule to determine the amount the employee earns based on their total sales amount.

3.	**A cell phone plan costs an initial fee of $250 plus $30 per month.**
	a. Write a rule to determine the total amount paid to the cell phone company (based on the number of months you have had this plan).
	b. If you have paid the cell phone company a total of $1060, how many months have you had this plan?
4.	**A hotel's water reservoir is filled completely at the beginning of the month. The water level decreases by the same amount each day and water levels measured at different days are shown in the table of values below.** | # of days since filling	2	5	8
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Amount of water remaining	22,000	19,750	17,500	
	a. Write a rule to determine the amount of water remaining in the reservoir (based on the number of days since the beginning of the month).
	b. If it has been 16 days since filling the tank, how much water remains?

5.	**Eric works in selling insurance policies. Every month Eric earns a commission of 15% on his total sales for the month.**
	a. Write a rule to determine the monthly amount Eric earns (based on his total monthly sales).
	b. This month, Eric earns $1735. What were his total monthly sales this month?
6.	**The basketball team is holding a bake sale to earn money for new uniforms. They are selling cookies for $1.25.**
	a. Write a rule to determine the amount of money the basketball team earns from the bake sale (based on the number of cookies sold).
	b. The basketball team sold a total of 130 cookies. How much money did they earn?