Name _____
Date _____ Per _____ A# _____

Writing Linear Equations

For each situation: define the variables in words, identify the growth (slope) and the starting point (y-intercept) and write an equation. Then using the equation, solve for the missing value.

EXAMPLE:

Mrs. Talmage went to the fair. She was charged $12 for admission, and then $3 for every ride. How many rides can she go on if she only has $36.00 total?

Let x = _____ k= _____ b= _____

Let y = _____ Equation: _____

1. A tree is 3 feet tall **one year after** it is planted. It grows 4 feet each year. In how many years will the tree be 80 feet tall if it keeps growing at the same rate?

2. Mrs. Pickle has been over-feeding her cat who weighs 21 ½ pounds. The veterinarian told her that her cat must lose weight. If Mrs. Pickle puts her cat on a diet and the cat loses ¼ pound per week, when will the cat reach its healthy weight of 15 pounds?

3. Miss Weighall and her dog, Bug, are hiking up to Lake Ilsanjo. Lake Ilsanjo's elevation is 1000 feet. They start on flat ground (elevation 0ft) and climb 3 feet every 2 minutes. How long has Miss Weighall been hiking when she reaches Lake Ilsanjo?

4. Katrina has a savings account with $185. If she spends $5.00 **twice** a week on frozen yogurt, when will she run out of money?

5. Water in a lake is 4 feet below sea level. A large storm hits and rainfall causes the lake to rise 2 feet each day. How many days has it been raining if the lake is 12 feet above sea level?

6. Sophie wants to go ice skating at Snoopy's Ice Arena. It costs $5 to rent skates and $2 per hour of skating. How much will it cost to skate for 4 hours?

7. Martha hand knits dog sweaters for her business Fuzzy Pups. She has already sold 30 sweaters, and has been consistently selling four sweaters each month. In how many months will she have sold a total of 66 dog sweaters?

8. Sam has $75.00. He earns $20.00 each day. If Sam works for 17 days, how much money will he have saved up?