

Linear Functions 3
Homework 1-25-07

- 1) I'm trying to save up for a big screen TV. I make the decision to have \$55 of each monthly paycheck go towards the TV savings fund (previously my rainy day fund). After 4 paychecks, I have a total of \$540.
 - a) How much money did I have in my savings account when I first decided to make it a TV fund?
 - b) Define a function that relates the amount of money in my TV fund with the number of months that I have been saving.
 - c) Sketch a graph that shows how much money I have saved at each moment in time during the first 8 months after I make the change. Be sure to think about how much money I have saved *between* paychecks.

- 2) You just got done with your bath (yes, bath again) and you begin to drain the water. The water is draining at a rate of 1.5 gallons per minute. After draining for 4 minutes, there is still 38 gallons in the tub.
 - a) How many gallons of water were in the tub before you began draining?
 - b) Define a function that relates the number of gallons in the tub and the number of minutes since you began draining.
 - c) Sketch a graph that shows how many gallons were in the tub at each moment in time during the 10 minutes after I started the clock.

- 3) Here's a point (3, 12) and a constant rate of 2.5. Define a function whose graph passes through that point so that any change in y is 2.5 times the corresponding change in x . Then come up with a scenario for it. 😊 Oh yeah, graph it too!

